

SEQUENCE LISTING

<110> Kere, Juha
 Taipale, Mikko
 Nopola-Hemmi, Jaana
 Kaminen, Nina

<120> Novel Human Gene Functionally Related To Dyslexia

<130> DYXC1

<140>

<141>

<160> 21

<170> PatentIn Ver. 2.1

<210> 1

<211> 1263

<212> DNA

<213> Homo sapiens

<220>

<223> coding sequence for human DYXC1 (cDNA)

<400> 1

```

atgcctcttc aggttagcga ttacagctgg cagcagacga agactgcggt ctttctgtct 60
ctgcccctca aaggcgtgtg cgtcagagac acggacgtgt tctgcacgga aaactatctg 120
aaggteaact ttccctccatt tttatttgag gcattttctt atgctcccat agacgatgag 180
agcagcaaaag caaagattgg gaatgacacc attgtcttca ccttgtataa aaaagaagcg 240
gccatgtggg agaccctttc tgtgacgggt gttgacaaag agatgatgca aagaattaga 300
gaaaaatcta ttttacaagc acaagagaga gcaaaaagaag ctacagaagc aaaagctgca 360
gcaaagcggg aagatcaaaa atacgcacta agtgatcatga tgaagattga agaagaagag 420
aggaaaaaaa tagaagatat gaaagaaaat gaacggataa aagccactaa agcattggaa 480
gcctggaagg aatatcaaag aaaagctgag gagcaaaaaa aaattcagag agaagagaaa 540
ttatgtcaaa aagaaaagca aattaaagaa ggaagaaaaa aaataaaaata taagagtctt 600
actagaaatt tggcatctag aaatcttgct ccaaaaggga gaaattcaga aaatatattt 660
actgagaagt taaaggaaga cagtattcct gctcctcgct ctgttggcag tattaaaatc 720
aactttaccc ctcgagtatt cccaacagct ctctgtgaat cacaagtagc agaagaggag 780
gagtggctac acaaacaagc tgaggcacga agagcaatga atactgacat agctgaactt 840
tgcgatttaa aagaagaaga aaagaaccca gaatggttga aggataaagg aaacaaattg 900
tttgcaacgg aaaactattt ggcagctatc aatgcatata atttagccat aagactaaat 960
aataagatgc cactattgta tttgaaccgg gctgcttgcc acctaaaact aaaaaactta 1020
cacaaggcta ttgaagattc ttctaaggca ctggaattat tgatgccacc tggtacagac 1080
aatgctaata caagaatgaa ggcacatgta cgacgtggaa cagcattctg tcaactagaa 1140
ttgtatgtag aaggcctaca ggattatgaa gcggcactta agattgatcc atccaacaaa 1200
attgtacaaa ttgatgctga gaagattcgg aatgtaattc aaggaacaga actaaaatct 1260
taa
1263

```

<210> 2

<211> 1993

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (369)..(1628)

<220>

<223> human DYXC1 mRNA as cDNA

<400> 2

```

tcctctccta ttatgcaaac ccacaccatg gatccagcag actactctgg ccccagcatg 60
ctgctccttg ggatgatggg agaaggggga aacctgtggt ttctcttggt tttagggtat 120
gggtctactt ctttgaacat tcgctcagat cgtaaggtaa cccaagaat cggcatcact 180
ctctgggtctg ggcgcttga tagtcacgca tggagtccgc gaggtgctgg cgccggagca 240
cgctgggaac gccgggctcc cggcgggctt gaccgggaag ggctggcgca tggtaacccc 300
agcttcccta gcaaccaagc aggcgcaaga agcaaccagc cgcgctatcc gctcccgttg 360
ctaccgga atg cct ctt cag gtt agc gat tac agc tgg cag cag acg aag 410
      Met Pro Leu Gln Val Ser Asp Tyr Ser Trp Gln Gln Thr Lys
          1             5             10

act gcg gtc ttt ctg tct ctg ccc ctc aaa ggc gtg tgc gtc aga gac 458
Thr Ala Val Phe Leu Ser Leu Pro Leu Lys Gly Val Cys Val Arg Asp
      15             20             25             30

acg gac gtg ttc tgc acg gaa aac tat ctg aag gtc aac ttt cct cca 506
Thr Asp Val Phe Cys Thr Glu Asn Tyr Leu Lys Val Asn Phe Pro Pro
          35             40             45

ttt tta ttt gag gca ttt ctt tat gct ccc ata gac gat gag agc agc 554
Phe Leu Phe Glu Ala Phe Leu Tyr Ala Pro Ile Asp Asp Glu Ser Ser
          50             55             60

aaa gca aag att ggg aat gac acc att gtc ttc acc ttg tat aaa aaa 602
Lys Ala Lys Ile Gly Asn Asp Thr Ile Val Phe Thr Leu Tyr Lys Lys
          65             70             75

gaa gcg gcc atg tgg gag acc ctt tct gtg acg ggt gtt gac aaa gag 650
Glu Ala Ala Met Trp Glu Thr Leu Ser Val Thr Gly Val Asp Lys Glu
          80             85             90

atg atg caa aga att aga gaa aaa tct att tta caa gca caa gag aga 698
Met Met Gln Arg Ile Arg Glu Lys Ser Ile Leu Gln Ala Gln Glu Arg
          95             100             105             110

gca aaa gaa gct aca gaa gca aaa gct gca gca aag cgg gaa gat caa 746
Ala Lys Glu Ala Thr Glu Ala Lys Ala Ala Ala Lys Arg Glu Asp Gln
          115             120             125

aaa tac gca cta agt gtc atg atg aag att gaa gaa gaa gag agg aaa 794
Lys Tyr Ala Leu Ser Val Met Met Lys Ile Glu Glu Glu Glu Arg Lys
          130             135             140

aaa ata gaa gat atg aaa gaa aat gaa cgg ata aaa gcc act aaa gca 842
Lys Ile Glu Asp Met Lys Glu Asn Glu Arg Ile Lys Ala Thr Lys Ala
          145             150             155

ttg gaa gcc tgg aaa gaa tat caa aga aaa gct gag gag caa aaa aaa 890
Leu Glu Ala Trp Lys Glu Tyr Gln Arg Lys Ala Glu Glu Gln Lys Lys
          160             165             170

att cag aga gaa gag aaa tta tgt caa aaa gaa aag caa att aaa gaa 938
Ile Gln Arg Glu Glu Lys Leu Cys Gln Lys Glu Lys Gln Ile Lys Glu

```

175	180	185	190	
gga aga aaa aaa ata aaa tat aag agt ctt act aga aat ttg gca tct				986
Gly Arg Lys Lys Ile Lys Tyr Lys Ser Leu Thr Arg Asn Leu Ala Ser	195	200	205	
aga aat ctt gct cca aaa ggg aga aat tca gaa aat ata ttt act gag				1034
Arg Asn Leu Ala Pro Lys Gly Arg Asn Ser Glu Asn Ile Phe Thr Glu	210	215	220	
aag tta aag gaa gac agt att cct gct cct cgc tct gtt ggc agt att				1082
Lys Leu Lys Glu Asp Ser Ile Pro Ala Pro Arg Ser Val Gly Ser Ile	225	230	235	
aaa atc aac ttt acc cct cga gta ttc cca aca gct ctt cgt gaa tca				1130
Lys Ile Asn Phe Thr Pro Arg Val Phe Pro Thr Ala Leu Arg Glu Ser	240	245	250	
caa gta gca gaa gag gag gag tgg cta cac aaa caa gct gag gca cga				1178
Gln Val Ala Glu Glu Glu Glu Trp Leu His Lys Gln Ala Glu Ala Arg	255	260	265	270
aga gca atg aat act gac ata gct gaa ctt tgc gat tta aaa gaa gaa				1226
Arg Ala Met Asn Thr Asp Ile Ala Glu Leu Cys Asp Leu Lys Glu Glu	275	280	285	
gaa aag aac cca gaa tgg ttg aag gat aaa gga aac aaa ttg ttt gca				1274
Glu Lys Asn Pro Glu Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala	290	295	300	
acg gaa aac tat ttg gca gct atc aat gca tat aat tta gcc ata aga				1322
Thr Glu Asn Tyr Leu Ala Ala Ile Asn Ala Tyr Asn Leu Ala Ile Arg	305	310	315	
cta aat aat aag atg cca cta ttg tat ttg aac cgg gct gct tgc cac				1370
Leu Asn Asn Lys Met Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His	320	325	330	
cta aaa cta aaa aac tta cac aag gct att gaa gat tct tct aag gca				1418
Leu Lys Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala	335	340	345	350
ctg gaa tta ttg atg cca cct gtt aca gac aat gct aat gca aga atg				1466
Leu Glu Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met	355	360	365	
aag gca cat gta cga cgt gga aca gca ttc tgt caa cta gaa ttg tat				1514
Lys Ala His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr	370	375	380	
gta gaa ggc cta cag gat tat gaa gcg gca ctt aag att gat cca tcc				1562
Val Glu Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser	385	390	395	
aac aaa att gta caa att gat gct gag aag att cgg aat gta att caa				1610
Asn Lys Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln	400	405	410	
gga aca gaa cta aaa tct taatgactat tagaagtaac taagtattgt				1658
Gly Thr Glu Leu Lys Ser	415	420		

tataagtttt ttaaaaacaa ctggaggcat ctttgtacat attatggcca gttgtacaga 1718
 atcgctttct gtttagtact ttagttctgt tgagggcaaa atattataaa tctatagaaa 1778
 ataaactggt tgacttgaat catttctgaa taagtaaatac taaataagaa tctattttaa 1838
 ttccttattt cttcatatta atacatatgt atactttttt gtgttactga attaagcttg 1898
 cccttgtaac aaaatatggt ttggtatagt taccaggaca cttactgatt aatttttaac 1958
 aaggtagaat tttaaaataa aagatttata aataa 1993

<210> 3

<211> 420

<212> PRT

<213> Homo sapiens

<223> human DYXC1 mRNA as cDNA

<400> 3

Met	Pro	Leu	Gln	Val	Ser	Asp	Tyr	Ser	Trp	Gln	Gln	Thr	Lys	Thr	Ala
1				5					10					15	
Val	Phe	Leu	Ser	Leu	Pro	Leu	Lys	Gly	Val	Cys	Val	Arg	Asp	Thr	Asp
			20					25					30		
Val	Phe	Cys	Thr	Glu	Asn	Tyr	Leu	Lys	Val	Asn	Phe	Pro	Pro	Phe	Leu
		35					40					45			
Phe	Glu	Ala	Phe	Leu	Tyr	Ala	Pro	Ile	Asp	Asp	Glu	Ser	Ser	Lys	Ala
	50					55					60				
Lys	Ile	Gly	Asn	Asp	Thr	Ile	Val	Phe	Thr	Leu	Tyr	Lys	Lys	Glu	Ala
65					70					75					80
Ala	Met	Trp	Glu	Thr	Leu	Ser	Val	Thr	Gly	Val	Asp	Lys	Glu	Met	Met
				85					90					95	
Gln	Arg	Ile	Arg	Glu	Lys	Ser	Ile	Leu	Gln	Ala	Gln	Glu	Arg	Ala	Lys
			100					105					110		
Glu	Ala	Thr	Glu	Ala	Lys	Ala	Ala	Ala	Lys	Arg	Glu	Asp	Gln	Lys	Tyr
		115					120					125			
Ala	Leu	Ser	Val	Met	Met	Lys	Ile	Glu	Glu	Glu	Glu	Arg	Lys	Lys	Ile
	130					135					140				
Glu	Asp	Met	Lys	Glu	Asn	Glu	Arg	Ile	Lys	Ala	Thr	Lys	Ala	Leu	Glu
145					150					155					160
Ala	Trp	Lys	Glu	Tyr	Gln	Arg	Lys	Ala	Glu	Glu	Gln	Lys	Lys	Ile	Gln
			165					170						175	
Arg	Glu	Glu	Lys	Leu	Cys	Gln	Lys	Glu	Lys	Gln	Ile	Lys	Glu	Gly	Arg
			180					185					190		
Lys	Lys	Ile	Lys	Tyr	Lys	Ser	Leu	Thr	Arg	Asn	Leu	Ala	Ser	Arg	Asn
		195					200					205			
Leu	Ala	Pro	Lys	Gly	Arg	Asn	Ser	Glu	Asn	Ile	Phe	Thr	Glu	Lys	Leu

210	215	220
Lys Glu Asp Ser Ile	Pro Ala Pro Arg Ser Val	Gly Ser Ile Lys Ile
225	230	235 240
Asn Phe Thr Pro Arg Val Phe Pro Thr Ala Leu Arg Glu Ser Gln Val		
	245	250 255
Ala Glu Glu Glu Glu Trp Leu His Lys Gln Ala Glu Ala Arg Arg Ala		
	260	265 270
Met Asn Thr Asp Ile Ala Glu Leu Cys Asp Leu Lys Glu Glu Glu Lys		
	275	280 285
Asn Pro Glu Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu		
	290	295 300
Asn Tyr Leu Ala Ala Ile Asn Ala Tyr Asn Leu Ala Ile Arg Leu Asn		
	305	310 315 320
Asn Lys Met Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys		
	325	330 335
Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu		
	340	345 350
Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met Lys Ala		
	355	360 365
His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu		
	370	375 380
Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser Asn Lys		
	385	390 395 400
Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln Gly Thr		
	405	410 415
Glu Leu Lys Ser		
	420	

<210> 4
 <211> 1697
 <212> DNA
 <213> Mus musculus

<220>
 <221> CDS
 <222> (48)..(1307)

<220>
 <223> murine DYXC1 mRNA as cDNA

<400> 4
 cggacgcgtg ggcgacgtaa agtggctgtg cagtccctgg tcccgcc atg cca gtg 56
 Met Pro Val
 1

cga gtg agc gaa ttc agc tgg cag cag acg ccg gcc acg atc ttc ctg 104

Arg	Val	Ser	Glu	Phe	Ser	Trp	Gln	Gln	Thr	Pro	Ala	Thr	Ile	Phe	Leu	
5						10					15					
tcg	ctg	cct	ctg	cgg	ggc	gtc	tgc	gtg	cgc	gat	gct	gac	gta	ttc	tgt	152
Ser	Leu	Pro	Leu	Arg	Gly	Val	Cys	Val	Arg	Asp	Ala	Asp	Val	Phe	Cys	
20					25					30					35	
ggg	gaa	agt	tac	ctg	aag	gtt	aac	ttt	cct	cca	ttt	tta	ttt	gag	ctg	200
Gly	Glu	Ser	Tyr	Leu	Lys	Val	Asn	Phe	Pro	Pro	Phe	Leu	Phe	Glu	Leu	
				40					45					50		
ttt	ctc	tat	gct	ccc	ata	gat	gat	ggg	aag	agc	aaa	gcc	aag	att	gga	248
Phe	Leu	Tyr	Ala	Pro	Ile	Asp	Asp	Gly	Lys	Ser	Lys	Ala	Lys	Ile	Gly	
			55					60					65			
aat	gac	acg	att	ctt	ttc	aca	ttg	tat	aaa	aag	gag	cca	gtt	ctg	tgg	296
Asn	Asp	Thr	Ile	Leu	Phe	Thr	Leu	Tyr	Lys	Lys	Glu	Pro	Val	Leu	Trp	
		70					75					80				
gat	agc	ctt	tct	gtg	ccg	ggg	gtt	gat	aaa	gag	atg	atg	cag	aga	ata	344
Asp	Ser	Leu	Ser	Val	Pro	Gly	Val	Asp	Lys	Glu	Met	Met	Gln	Arg	Ile	
	85					90					95					
aga	gaa	aaa	tct	atc	ttg	caa	gca	cag	gag	aaa	gca	aaa	gag	gcc	aca	392
Arg	Glu	Lys	Ser	Ile	Leu	Gln	Ala	Gln	Glu	Lys	Ala	Lys	Glu	Ala	Thr	
100					105					110					115	
gaa	gca	aaa	gct	gtt	gcc	aag	cga	gaa	gac	cag	aga	tac	gca	cta	ggc	440
Glu	Ala	Lys	Ala	Val	Ala	Lys	Arg	Glu	Asp	Gln	Arg	Tyr	Ala	Leu	Gly	
				120					125					130		
gag	atg	atg	aag	att	gaa	gaa	gaa	gag	agg	aaa	aaa	ctc	gaa	gat	ctg	488
Glu	Met	Met	Lys	Ile	Glu	Glu	Glu	Glu	Arg	Lys	Lys	Leu	Glu	Asp	Leu	
			135					140					145			
aaa	gaa	aat	gaa	cgg	aaa	aag	gca	act	agc	gaa	tta	gaa	gcg	tgg	aaa	536
Lys	Glu	Asn	Glu	Arg	Lys	Lys	Ala	Thr	Ser	Glu	Leu	Glu	Ala	Trp	Lys	
		150					155					160				
gaa	tgt	caa	aag	aaa	gct	gac	gga	caa	aaa	aga	gtc	cag	agg	aag	gag	584
Glu	Cys	Gln	Lys	Lys	Ala	Asp	Gly	Gln	Lys	Arg	Val	Gln	Arg	Lys	Glu	
	165					170					175					
aaa	ccg	ctc	gag	gga	aag	caa	gct	gaa	gag	acc	aaa	gct	cta	aaa	cct	632
Lys	Pro	Leu	Glu	Gly	Lys	Gln	Ala	Glu	Glu	Thr	Lys	Ala	Leu	Lys	Pro	
180					185					190					195	
cgg	ggg	ttg	ccc	cgg	aag	gcc	cca	ccc	act	cgc	ctc	ccc	aca	aga	ggg	680
Arg	Gly	Leu	Pro	Arg	Lys	Ala	Pro	Pro	Thr	Arg	Leu	Pro	Thr	Arg	Gly	
				200					205					210		
agg	aat	tgg	gaa	aac	ata	ttt	cct	gag	aag	tta	aag	gaa	gac	aga	gtc	728
Arg	Asn	Trp	Glu	Asn	Ile	Phe	Pro	Glu	Lys	Leu	Lys	Glu	Asp	Arg	Val	
			215					220					225			
cct	gcg	cct	cgc	tcc	gct	ggc	agt	att	caa	atc	agc	ttt	acc	cct	cga	776
Pro	Ala	Pro	Arg	Ser	Ala	Gly	Ser	Ile	Gln	Ile	Ser	Phe	Thr	Pro	Arg	
		230					235					240				
gtg	ttc	cca	aca	gca	ctt	cgg	gaa	tcc	caa	gtc	gca	gaa	gag	gag	gag	824
Val	Phe	Pro	Thr	Ala	Leu	Arg	Glu	Ser	Gln	Val	Ala	Glu	Glu	Glu	Glu	

245	250	255	
tgg ctg cat aaa caa gca gaa gca cgg aga gcc atg agc act gac ctt			872
Trp Leu His Lys Gln Ala Glu Ala Arg Arg Ala Met Ser Thr Asp Leu			
260	265	270	275
cct gag ttc ttt gac tta aaa gaa gaa gag agg aat cca gac tgg ttg			920
Pro Glu Phe Phe Asp Leu Lys Glu Glu Glu Arg Asn Pro Asp Trp Leu			
	280	285	290
aaa gac aag gga aac aaa ttg ttt gca aca gaa aac tat ttg gca gcg			968
Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu Asn Tyr Leu Ala Ala			
	295	300	305
gtt gat gca tat aat tta gcc ata cga ctg aac tgt aag atc cca tta			1016
Val Asp Ala Tyr Asn Leu Ala Ile Arg Leu Asn Cys Lys Ile Pro Leu			
	310	315	320
ttg tat ttg aat cgg gct gct tgc cac ctc aaa tta aaa aac cta cac			1064
Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys Leu Lys Asn Leu His			
	325	330	335
aag gcc atc gag gac tct tct aag gca cta gag tta ttg aca cca cct			1112
Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu Leu Leu Thr Pro Pro			
	340	345	350
gtt gct gac aat gcc aat gca aga atg aag gca cac gtc cga cga ggg			1160
Val Ala Asp Asn Ala Asn Ala Arg Met Lys Ala His Val Arg Arg Gly			
	360	365	370
aca gcg ttc tgt caa cta gaa ttg tat gtt gaa ggc ttg caa gat tat			1208
Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu Gly Leu Gln Asp Tyr			
	375	380	385
gaa gct gca ctt aag att gac cca gcc aac aca gtt gta cag aac gat			1256
Glu Ala Ala Leu Lys Ile Asp Pro Ala Asn Thr Val Val Gln Asn Asp			
	390	395	400
gca gag aag att cgg aat ata att caa ggg acg gca ctg aag tct cgt			1304
Ala Glu Lys Ile Arg Asn Ile Ile Gln Gly Thr Ala Leu Lys Ser Arg			
	405	410	415
gac tagaggcagc taggcacagg agtctctgca agtactgtag ctctgtacag			1357
Asp			
420			
taccgggcta gtgagccttt ggaatggcag tgcctgacga atcatctcca aggggaaaat			1417
ggcctagctc tcaactgcctt tgatcccagt accgggaagg cagaggtagg caagtctcta			1477
tgagcttgag gccagccaga gctcgacagc atgcaaaaaca caaaagaaag ccagagaaca			1537
ggctgtttga gtcctcaatc ttggcacagg gattggctgg gctctgatgt tgctgttgaa			1597
attgccagga tactactgag gaatctacag aatagaattt ccacataaaa gattgtgcat			1657
ataaaaatatt cttattatat taaatatagt atttcattcc			1697

<210> 5

<211> 420

<212> PRT

<213> Mus musculus

<223> murine DYXC1 mRNA as cDNA

<400> 5

Met Pro Val Arg Val Ser Glu Phe Ser Trp Gln Gln Thr Pro Ala Thr
1 5 10 15

Ile Phe Leu Ser Leu Pro Leu Arg Gly Val Cys Val Arg Asp Ala Asp
20 25 30

Val Phe Cys Gly Glu Ser Tyr Leu Lys Val Asn Phe Pro Pro Phe Leu
35 40 45

Phe Glu Leu Phe Leu Tyr Ala Pro Ile Asp Asp Gly Lys Ser Lys Ala
50 55 60

Lys Ile Gly Asn Asp Thr Ile Leu Phe Thr Leu Tyr Lys Lys Glu Pro
65 70 75 80

Val Leu Trp Asp Ser Leu Ser Val Pro Gly Val Asp Lys Glu Met Met
85 90 95

Gln Arg Ile Arg Glu Lys Ser Ile Leu Gln Ala Gln Glu Lys Ala Lys
100 105 110

Glu Ala Thr Glu Ala Lys Ala Val Ala Lys Arg Glu Asp Gln Arg Tyr
115 120 125

Ala Leu Gly Glu Met Met Lys Ile Glu Glu Glu Glu Arg Lys Lys Leu
130 135 140

Glu Asp Leu Lys Glu Asn Glu Arg Lys Lys Ala Thr Ser Glu Leu Glu
145 150 155 160

Ala Trp Lys Glu Cys Gln Lys Lys Ala Asp Gly Gln Lys Arg Val Gln
165 170 175

Arg Lys Glu Lys Pro Leu Glu Gly Lys Gln Ala Glu Glu Thr Lys Ala
180 185 190

Leu Lys Pro Arg Gly Leu Pro Arg Lys Ala Pro Pro Thr Arg Leu Pro
195 200 205

Thr Arg Gly Arg Asn Trp Glu Asn Ile Phe Pro Glu Lys Leu Lys Glu
210 215 220

Asp Arg Val Pro Ala Pro Arg Ser Ala Gly Ser Ile Gln Ile Ser Phe
225 230 235 240

Thr Pro Arg Val Phe Pro Thr Ala Leu Arg Glu Ser Gln Val Ala Glu
245 250 255

Glu Glu Glu Trp Leu His Lys Gln Ala Glu Ala Arg Arg Ala Met Ser
260 265 270

Thr Asp Leu Pro Glu Phe Phe Asp Leu Lys Glu Glu Glu Arg Asn Pro
275 280 285

Asp Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu Asn Tyr
290 295 300

Leu Ala Ala Val Asp Ala Tyr Asn Leu Ala Ile Arg Leu Asn Cys Lys
 305 310 315 320
 Ile Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys Leu Lys
 325 330 335
 Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu Leu Leu
 340 345 350
 Thr Pro Pro Val Ala Asp Asn Ala Asn Ala Arg Met Lys Ala His Val
 355 360 365
 Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu Gly Leu
 370 375 380
 Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ala Asn Thr Val Val
 385 390 395 400
 Gln Asn Asp Ala Glu Lys Ile Arg Asn Ile Ile Gln Gly Thr Ala Leu
 405 410 415
 Lys Ser Arg Asp
 420

<210> 6

<211> 50000

<212> DNA

<213> Homo sapiens

<220>

<223> human DYXC1 chromosomal gene region, nucleotides
1-50000

<400> 6

```

aagctttttgc tttccttgat catgtactgt tgagaaagca atatttgga acattgttgc 60
atttttaaca ttatctttaa gaatt'aaaag gcacatacct ttgatgccat aattctgggt 120
ctaggagcta cttgtaaatc tctctaaagg catttataca tggattttta ttgcagcaac 180
agcagaggct tggaaacaac ttaaaccattg atcaatatgg aggggactag tttaatgaat 240
catggtgtag tcacactgta gaatactact cagctattac aaaataaaga agttctaaat 300
agagtgatat ggaatgatct ccaagtaaga aagcaaggta cactgtgtgt actgtgtgta 360
ctttgtctca tttgtgtcct ccccgccaaa aaaataataa taatatactt taatatactt 420
agattatctt tggaaaggta ggccagaaac tagtaatagt ggtggcctct gagacagggg 480
accagttact aaagatttta gagtgaagaga gagagacttg ctttttcact gaaagaataa 540
taaataatggg agcaggggatg aatggctatt tctggctcaa actatgggaa agactttttt 600
gaaacagata atgataataa aagtattgct cttgtctaac gaaaatagaa aacattaaca 660
ggtaaataata atagatatta ctatgagata taaagtaact tcacttacaa gtgggaaata 720
ttacctgaat tttttttttt ttaggtgggtg atagtggact ggatgggtta ggaggaccag 780
gtgtacaact aggaagccca gataagaaaa agcgcaaggc aaatacacag gtaaaactgac 840
attttcttta ataaaagttt ttcttttgcta gtatggtcag gctgatgagg taaatttgaa 900
cttggtcata agtttttggtt tctattcaag tgattgtact tttaatcatt cattgtactt 960
tcaatcaate attccagtga tggtaactttc tttttttttt tttttttttt 1020
tttttttttt ttagggtgat tcttgctctg ttgccagact ggagtgaagt cagtgggggtg 1080
atctcagctc actgcaacct ccacctccca gggtgaagcg attctcctgc ctcagcctcc 1140
caagtagctg gaattacagg cacgcgccac catgcccage taatttttgt attttttagta 1200
gagacgggct ttcaccatgt tgatcaggat ggtctcaatc tcttgacctc gtgatccacc 1260
cgcctcggcc tcccaaagtg ctaggattac aggtgtgagc caccacgcct cgctgtattt 1320
ttttttgttt aagtctgtaa ctagtggtta ttgtcagact ataggcatag actagatact 1380
gcaaaaagga agtgtgggca aattaaaatg cttgttctta ggctgggcat ggtgggtcat 1440

```

gcctataatc	ccagcccttt	gggaggccaa	ggtgggtgga	ttacttgagg	ccaggagttc	1500
gagaccagac	tggccaacat	ggggaaagcc	cttctctact	aaaaatataa	aaattagccg	1560
ggtgtggtgg	cacactcctg	taatcccagc	tattgcggag	gctgaggcat	gagaattgct	1620
tgaacctgga	aggtagaggt	tgcaatgagc	tgagatcacg	ccactgcact	ccagccttgg	1680
tgacagcgtg	agactctgtc	tcaaaaaaaa	attaaaatta	aaatgcttgt	tcttaaatct	1740
aatttaaagg	tttttaaagg	gcatgaatgc	ctgcagttct	attaaaagat	ttcaaaatat	1800
atagtaacaa	ttttaacctg	aaataattgt	tcaactataa	tagtgattta	gtattatgtg	1860
catatcacga	agcaatcatg	atggaggcct	ttttttgtta	taacttgtgg	ttgtaacaag	1920
caattatata	tacaggctct	cactgtttta	ttctttataa	atttgaagca	ctctttctat	1980
gataaaggct	actagtaagt	atgtgtgtac	agattactga	tctttttatc	attttgacca	2040
ccatctgtta	aacttgcagt	gtgactaaaa	ctggcagttt	attttttcag	tctgaggccc	2100
agaacttaat	gttttgga	tattttaatt	gtatctccct	gaagttaagc	taggggaaaa	2160
acttagattc	tgattgttgt	tatttaactt	tatgactgtt	tggtgtatga	gaggtatttt	2220
aggttagact	gcttttagtat	ttaagtga	gtttctagag	ttataggtaa	gcatattaaa	2280
tgaaaattag	gataatgaag	cttcttttga	aagttaacta	cttttggttt	ttgaagtta	2340
aatggatttg	agctcagaaa	atcatacttt	attttctttt	ggaaatgaaa	taaaactaaa	2400
tattttttatc	agcaagtata	attaaatata	aacattagtc	aaaattgaaa	ggtcaagtga	2460
agataataaa	tgtttgttaa	cactgcaaga	gaaatttgac	taatactagg	ttcacaggta	2520
ttaaggtaac	aggacaattt	taataatgta	tttgatcgaa	aacatgtatt	ttactttaca	2580
ttctcatttc	agggaccttc	tttccctcca	ttgtctgagt	atgctccacc	accgaatcca	2640
aactctgacc	atctagtggc	tgctaatacca	tttgatgaca	actataatac	tatttcctat	2700
aaaccactac	cttcgtcaaa	tccatatctt	ggccctggtt	atcctggctt	tggaggctat	2760
agtacattca	gaatgccacc	tcacgttccc	ccaagaatgt	cttccccata	ctgtgggtcct	2820
tactcactca	ggaaccagcc	acacccattt	cctcagaatc	ctctgggcat	gggtttta	2880
cgacctcatg	cttttaactt	tgggccacat	gataattcaa	gtttcggtaa	tccatcttat	2940
aataatgcac	taagtacaga	tgtaacatg	cctaataca	attttagaca	aaatcctgct	3000
gaaaatttca	gtcaaattcc	tccacagaat	gctagccaag	tttctaacc	cgatttggca	3060
tctaattttg	ttcctggaaa	taattcaaat	ttactttct	cgttagaatc	taatcattct	3120
tttattcctg	ccccaaacac	tttgggtcaa	gcaaaagcac	cacccccaaa	acaagacttt	3180
actcaaggag	caaccaaaaa	cactaatcaa	aattcctctg	ctcatccacc	tcaactgaat	3240
atggatgaca	cagtgaatca	gagtaatatt	gaattaaaaa	atgttaatcg	aaacaatgca	3300
gtaaatcagg	agaacagccg	ttcaagtagc	actgaagcca	caaacaataa	ccctgcaaat	3360
gggacgcaga	ataagccacg	acaaccaaga	ggtgcagcag	atgcctgcac	cacagaaaaa	3420
agcaataaat	cctctcttca	cccaaaccgt	catggccatt	cgtcttctga	cccagtgtat	3480
ccttgtggaa	tttgtacaaa	cgaggtgaac	gatgatcagg	atgccatctt	atgtgaggcc	3540
tcttgtcaga	aatggtttca	tcggatctgt	actggaatga	ctgaaacagc	ttatggcctc	3600
ttaactgcag	aagcatctgc	agtatggggc	tgtgatacct	gtatggctga	caaagatgtc	3660
cagttaatgc	gtactagaga	aacttttggg	ccatctgcag	tgggcagtga	tgtttaatca	3720
aaggcattaa	ctaaagtggg	tttattttcc	tgtgcattgc	agaagttcat	tgacacagga	3780
ttttaatgtt	ttacattatt	tttttaaatg	catacacaaa	aacattattt	acttagtttt	3840
tattaatcac	ttcatcacta	gagcaaat	tttattgtct	ttgcttgctg	tcttaaatga	3900
gaataatgta	tatgggggtg	ctttagaac	ataaataaat	gttagttgtt	gttattttatc	3960
acaaacataa	aagcctcttg	aaacttcaaa	ataatatata	acaaatgtag	gcaagtttta	4020
acttttaaaa	gttagaatca	ttgaaaaacg	tgtatttcag	tgtgaactt	tggttgatcc	4080
atattaaaga	tttagttcaa	aaagtttatc	aaggatccac	ttaacacgtc	ttcacaacat	4140
aatatatgta	actgtaacat	gggggaaagc	atacattttt	atggattaaa	aaaataatag	4200
tatgacacca	gattcctcct	ccactagggt	ctttggaatc	aatgaatttc	atattttcaag	4260
tgagttttca	ggatatctgt	ttgtacagat	acgagacaga	tcttagcata	tagtaaatcc	4320
tcagtaagta	ttgttgatta	acttgtggat	ggtaccacat	gaaattgcta	atattagatc	4380
agttgaaaat	tgactgcaat	tagtaaagtt	ggtataacgt	acgttcccag	ttgtgctatt	4440
tagaattatg	atagtattat	gtcctacttt	ttctttgata	ttgagttgtc	ttgttattgt	4500
ttattgtttt	ccagagaaat	actatagtat	ccacagaaga	attgtgaata	cttttttata	4560
attttgaact	gggacatatt	gcagatgagg	aaggtagaaa	catccatttg	gccttagagg	4620
gctctgctag	taaaagaact	actcagtggg	ggtttgaaaa	atcttgttct	ggggatctga	4680
atttcaaaaa	tgaaccctag	gggagatcaa	aatccatttt	aaacaaagat	caattaagag	4740
ccaaagtga	atctaacttg	caaacaacaa	tttgaagcct	tgcagcagac	ttaaggaatt	4800
cccgtctga	ctggggaaaa	gtataaaaa	ggacctgaga	gtacctctt	gagggatgat	4860
caagaatgga	gacagttgga	gttgtgtctc	ttaagattca	aaacagcaga	aatccatttt	4920
tggagcagat	tataacctgt	ggccaaaaaa	aaaaaatgtg	tgctgtttga	cagctaattg	4980
caatttatatc	aatcattgga	ggctggtaaa	gctcccta	atgttgccac	cattatcatt	5040
gcaacccaaaa	aaattctgaa	gattgtgtgg	tgatctacga	aagagataaa	taattactgt	5100

tattttaaacc	caagtgaaac	aatgacggca	gcagcatatt	atcaagaaat	ttaaattatg	5160
catgaaaatg	tgatttataa	acaatgtcct	ttgggttaaca	cacaagaacc	tacactttca	5220
cagacaagga	ctcgacctca	catgtcacaa	gctactaaag	caaagttaag	tgacttgggc	5280
tatgaaatth	tgatcatgtc	atthttagtc	ctggacctth	attccatgga	ctactgtcta	5340
tcatttggag	ctthtttctaa	gaaacaatgc	attccccaat	cgagatgaag	taactggaag	5400
atgttaacaa	tttatacagc	ctaacaaatg	atgaatttht	taaaagttag	acctttaata	5460
ttctgttgga	agaaaactat	tcattgtcct	gatgcatatt	ttgattgaat	aaaacttatt	5520
ttthttaaata	cattgtthtt	atthttgacct	acaaaaacag	caatttcata	tggtacaagg	5580
taatacaagg	ttthttccat	ttaccttga	ctagttagag	gtgagtacaa	aatattttca	5640
gtagttgtaa	aatattttat	tttacaattt	taggaaacaa	aatgatataa	actatacttc	5700
taggtactcc	tttgtgtgaa	aactttacca	gttgaaagcag	gttaaaatgc	agtatttttg	5760
gctgacaggc	atthtgatgg	gttcagtagt	gtacttgaag	atctcatttt	acttggattt	5820
tttattatac	atattttctt	aaatgtthta	ggacctagtt	atgttgctcc	tgaaagttht	5880
atgagtgtct	atthtttaata	aatgatgcac	tgtatgtctg	atgcctagtt	gtagcatcag	5940
atcatgattt	attattaccc	tgaatagagc	tagatgatag	atattttgag	tagaactttc	6000
cagtgttctc	aggagttaac	actttacatg	gtagtacttg	agttgtgatc	attactaaaa	6060
tcaattatgc	agttttctta	accttttatc	tctthtaagtt	tcagtagtta	gctgtthttg	6120
tgaaaatgaa	ataactttct	ccaagctagt	ctaaaggtat	gtgttatgca	atataatttc	6180
ttthttctatt	ccacatagtt	gtthtttaaaa	acctacaaac	aggtgaattt	ttattcaggt	6240
gttttaggtct	tcaaagcacc	ttactthaaat	aagaatctgt	aatatttcaa	aagaaaaact	6300
cacggttcat	tctgatagt	aatcatagcc	aaactgtaat	catagctgat	gaatagcgtt	6360
catgtgtttg	aattaattht	cctgtctagt	ctacatttgt	ctctacataa	tgctaagtca	6420
aaagttatat	agatgcttht	ggatggaata	agtatgaac	tgtaagaata	gccagatgat	6480
aattttgtct	aagaaggcta	ttatacaaac	tgaaatggct	tcttaggata	aatgataagc	6540
tgctttcaac	tttaaaaaata	tgacgtgatg	gaaaaaaaaca	caggtggaat	tgtaccttht	6600
ttgggtataat	cccttttctt	cactgaaagt	cctcatctta	cacacacaca	cacacacaca	6660
cacccccccac	agttttctcca	acatccttga	gtthttgctta	aattcaacct	ggctaactat	6720
gagcatctag	gttttactcac	caaagctagg	ttattgacag	aaaggtgggt	ttthttttgt	6780
ttthtttggt	ttgtttttgt	ttgtttttgt	ttthttgccag	tcttgctctg	ttgcccaggc	6840
tgaggtgcag	tgatgagatc	tcggctcact	gcaacgtctg	ccttcctggg	tcaagtgatt	6900
ctcctgctc	agcctcctga	gtagctggga	ttacagtcgc	ccaccatcac	acctggctaa	6960
ttthttgtatt	tttagtagag	acgggttcac	catgttggcc	aggctgggtg	caaactcctg	7020
acctcaagtg	atctgcccgc	ctcagcctcc	caaagtgtct	ggattacagg	tgtaagccac	7080
cacgctggc	cagacagaaa	atthttaaaaa	gcatcagttc	ctthttctcaga	acttgacttg	7140
ctcatgcact	agagaatttg	tggtccacat	gcttcttaggt	gttactcgat	tcactaatac	7200
tgaaacagct	cagcttgtga	aagataaatt	gttcttcaga	cagagtgcct	agaattagat	7260
ttgtgatcag	tgtthttcct	ttgtgtgaaa	tacttttagag	tactgtctata	attgttatct	7320
aaattagaag	gttatataca	taaaactaaa	gattttcttg	tactagtgtc	tattcttcat	7380
aaacacagtg	taaagaaatc	tactthttttg	gtggtttgtt	ttagactccc	aactctgcct	7440
agtggcagaa	aaacctctta	atagtgtggg	tcatacataa	atctgccaac	tttaatccaa	7500
ataagtatca	agagtcttca	ttcaatattc	tttcaaactt	gtttgtctcg	aacaaattag	7560
agtttttagca	cttattgttc	aatgtactat	agtaattgta	tttaatagta	agaaaaatata	7620
taagcaatga	ttthtttaaaa	gggagttctc	aagagtttht	gattttctttc	tgccgtgtat	7680
agaggtthtt	tatgcatgga	catttgtgtc	gtthttatct	ttthttcaatt	aaaaaaaaat	7740
ttaaaggcat	caggctccct	aagttcattt	gtaaatagtg	gcttggaact	ctacacaata	7800
gggaagctcc	taaaggctca	tttagacctt	aatcttagtta	atagtatcat	gctgaactct	7860
cagttthttt	taggaaacca	atcaatcagt	gtaggaggga	gaaagaagca	gaggtcttgt	7920
ctthtttctg	atgtgattag	gaggttaagt	tctthtggtg	gggtthttct	gcatttgccc	7980
ccttaccatg	ctaaactctg	gtgaaatgta	taagcagcct	tggtthttcc	tctcctgggt	8040
gctctgtgct	tcaacattth	atatctthtc	tcccatcaga	aatcctgtgt	ctthtgtgtg	8100
cagtagtagt	tggttagact	ttaaagagaaa	agcattthtt	actaagggtat	gaatgaagat	8160
agtgggaaaa	gtgtcattaa	atthttthttt	taaaaaagta	tgthttattaa	gaatgaatct	8220
ttaatatcta	acatttcaga	caatatgacc	gcatttcaga	taccatggga	agcagtacat	8280
ttagtgaatt	agctggtagt	gtctgagggg	actthcaggt	tctthtaggc	tggtgtgact	8340
tttcacagct	tctctctctc	taattctgaa	cttagagatt	ttctthtctat	ttctaattth	8400
tagtagctta	ttgttccatc	cagtagagca	ttataaaaagt	cacatctgca	tctthccaact	8460
tatgggtacag	tgatgggaat	ttggaagcac	ccctggagca	aagaggctag	ggatagcatt	8520
aacatctccc	aagacaagtg	gtatagggga	aatgaaggaa	agactgtggc	catgtatatg	8580
ccaggcggtta	atacatcaga	gctgcctgta	tttaattthta	aactthttgat	gaaactcagt	8640
ggataagcat	ctthtgtcata	ttthtgtcaat	aatacattac	ttgcaattat	attaaaaact	8700
attctaaata	cctgtacctt	tctthgtctg	tagatgtgta	gatgatgttg	ctthgtthgtc	8760

aaaatattat	cttttataaa	agaaagtcct	gcttcttato	atgatgtatg	tgacttaaat	8820
gattgtttca	tattaaaact	atctcttcct	tatgtactgt	ttacatatat	ctcttttttg	8880
gatattagtt	cagtactttt	atacaaatct	gagtggttgc	cacattgggtg	acatgtattt	8940
ttgcagtaac	tttttgtttt	gttcttagaa	catgtctaaa	gtaacacatg	cactagtgtc	9000
gtggtctgtg	gcaaaattac	tgtaatcaaa	attggaaaaa	aaaatgtttc	cagactttgt	9060
ccaacattta	ttcctatggc	aaaggaaatt	actatgtaat	actaattatt	tcttatgtctg	9120
gtatgtttta	agctactcta	tgaagtatgt	gaaacatcaa	tatttatgga	ttaatagatg	9180
gcctgatgtc	tttcaaattg	gagaggagta	aatttttagtg	ttaccaactc	atgacacttg	9240
taatacaata	aatcttaaaa	tttttatttt	ccacttacag	gtatacttta	ctaaataatt	9300
accttaaatg	gcagtgcata	ttaggatttt	ttagcacata	ctactaaaat	tatatagtaa	9360
cttttaactt	gtgctgatat	ttcccaacca	aaaaagacat	cattcaactt	atcataacca	9420
aaataagtag	tactgtaata	tttatcttca	tttatttaga	catgattaag	ataccgtaag	9480
actcctctaa	tttacctgga	attttttagcc	attgattcaa	ggacttgaat	gctgtttact	9540
tggtactacc	taatgaaagg	atttggtaat	aaagggtata	atcacgattt	taaagaaaaa	9600
tgtttcatct	tgaaggcaaa	tttttaagct	ttttatttag	aggtgtttac	ttaagaatag	9660
taatttaaaa	gcattcttat	tttgtcatta	agacaagtac	ccaaaagaat	tgtaataagt	9720
aatacttggc	caatgcaaat	ttgtacattt	gaaatcatat	acttgaaaga	aaaaaatgaa	9780
ggcttgtgag	tgcttaaaact	gcatactctt	ttaaaaattc	aaatttttaga	catatcagtt	9840
taaattatcc	ttaataagggt	tttactatgt	cagtgtatgt	tattacaaaa	tgtctacctt	9900
tgttatgtta	atgatatctc	tatactgcat	catattcggt	atggttatgg	tatattttgt	9960
acttttgatt	gtggactatt	gataggattg	atatagcaat	aaatctgatt	cagacttaat	10020
attttttaaa	acgctagata	ccatactgta	tcataatcct	attatatattg	acttgaatgc	10080
ccaaaatttt	catagttcta	tatttttatgt	taaaaattta	gtattacatg	ttagggattt	10140
atttttgtct	gctattttca	catacattct	tttagaactg	agtctgtttc	tatttagatc	10200
atagacgtct	aaagaagtat	tattaattca	tgaactgctt	tgtggaaaaa	tttaaataaa	10260
gtatgaaatg	actagattac	cccaaattgt	ttattttttt	ttttggttaa	tgaccaggtt	10320
acaattctca	gacaaatgaa	attggcttga	taactgattg	aatatagtag	ataatggaaa	10380
gtttgactct	ttaagggtct	ccaagtgtta	aatacattct	caattctgaa	ttacttcata	10440
gtaactactt	aaataatgggt	aagccaattc	tcctttttct	ttttgagata	tttaacacaa	10500
tttgctctct	ctgatcccat	tcctttcttc	cccaaaaacc	atgctagaat	ttaaaattgg	10560
aagagtttaa	tttgtcatct	acatttttagt	ttttttattc	tatagataag	taagaagaca	10620
agtagacgtt	ctgctgtcaa	gacagtccat	gttattgttg	gccattcttt	tcagggataa	10680
tgcttaatgt	tatttgtgctg	ttgtataagg	aatgttgttt	atcagtatat	agacctacca	10740
ttagtagaaa	tgatgtatgg	caggtcttct	tgaataatat	gtattgtaag	tttgtttcct	10800
atagtgttat	tatggttcag	attcttttaa	ataaagctag	tttttaaaga	gaaaaataac	10860
tttttaaagc	gtttgacttt	catcaggaca	agtaggtgtg	agaatcttgg	ctttgggtgg	10920
gagatgtcca	gtataacatc	aagcagggaa	tagcctacaa	tttatcagtg	taattttata	10980
ctaaggagag	aaccagtatt	tttagtcagg	ccttgctgta	tacatatattt	ttctgtgaag	11040
tctattcaga	aaactgagtc	ctggatttcc	ttaagaaatt	gtgagcatga	catatttact	11100
ttgattttaa	cagtttgtga	cttcagttct	gttagtaaaa	attatttgga	gaagagtttt	11160
acaacttcag	cagcttaatg	accctggtgg	cagagacacc	actgtagcaa	atattaagaa	11220
caaacttgtg	gctgggtgca	gtgactcacg	cctgtaattc	cagctactcg	ggaggtgtcg	11280
gcacgggaat	cacttgaatc	caggaagcag	aggttgcagt	gacagtgagc	tgagattgtg	11340
ccgtgtcact	ccagcctggg	cgacggagcg	agactcacga	gactctgtct	caaaaaaaaa	11400
aaaaaaaaag	aaaagaaaaa	aagaacaaac	tttcttgaat	gataagacct	ctagtttctc	11460
tgaacaacat	atcagttgcc	ttgagttctg	tacataaaaa	gaggctgaat	aaaataatgt	11520
gtcaactgat	gaaagcttga	cattataggt	aagaagtgat	aagatgaaat	ctcaagataa	11580
aatttgaatg	cgtgacattt	caaatttaat	aggaaaaaat	aaaaatatgt	gtatctcgct	11640
gaaggagaga	gaagatatat	atagagagaa	ttcttatcaa	ataacattga	tgctctaagt	11700
tactccctct	gttttaaaaa	tatagcagtg	ataaatatga	aaagataaaa	ttgaactcaa	11760
aaccatgcta	aatccaagga	caagtaatat	tgtacagaaa	gaaagcatga	gccatggtga	11820
agcagtagcc	tgcttgactc	tgagttctca	agcagaaact	tgtagtagga	aattctaatc	11880
tgacaaggta	atgaggtcta	aacatcttaa	aacatgagat	gcaataacag	tgctaaaagg	11940
gaaatatata	gcttttagatt	attttttaagt	ccaaagtatg	atgagctaag	ttgatctcaa	12000
gagactaaga	aaacaacaac	aacaaaaaac	ttgaaagtga	aaggaaggaa	ataataagaa	12060
ataaaaatagg	aaaacactag	aaggaataag	aagaccataa	ataggttatt	taaacaataa	12120
agatgaggcc	cagagcgggtg	gctcatgcct	gtaattccac	actttggggag	gccaagggtg	12180
gaggatcact	taagcccagg	agttcaagat	caacctgggc	aacataagga	gactctgtct	12240
acaaaaaatt	tttttaatta	gctaagtgtg	gtggtgcaca	cctgtggtct	cagctgtctca	12300
ggaggctgag	gtgggagtat	tgcttgagcc	caggagttga	ggctatagtg	ggccttgata	12360
tgccgctgca	cttcagttctg	agcaagagaa	caagaccttg	tctaaaaaaaa	aaaaaaaaaac	12420

tgagcctctg	acaagactga	tttttttttt	tttttttttt	tttttttttt	ttgagatgga	12480
aacttggtct	atcaccagg	ctagagtgc	gtggcacgat	cttggtcgc	tgcaatctcc	12540
acctccagg	gtcaagcaat	tctcgtgct	cagcctcctg	agtagccggg	attacaggcg	12600
catgccacca	tacctagcta	atttttgtat	tttttagtaa	gacgggggtt	caccatgttg	12660
gctaggctgg	tcttgaactc	ctgacctcaa	gtgatccgcc	tgctcagcc	tcccaaagtg	12720
ctgagattac	aggcatgagc	cactgtgccc	ggccaaaact	gatttttttt	ttttttttta	12780
tggtaggcag	aaatatcagg	aatgaaaatg	gaggcaagca	tagcactgct	ttaagccggt	12840
gctgagctgg	gatttctctc	cgctgctgta	ccacttgctga	aaggaagcta	aaaactgaaa	12900
cctaccttca	actgatacct	ggggctctaa	tttataggaa	gatgcagggc	taagggggta	12960
gaaatacgca	gttttttaaaa	gtacagagt	tggttaactgg	tttacaatat	gaagaaagaa	13020
ttgaagcagt	gaatttagcat	gtaacacgtc	gctgaattgg	ggtccctaag	acacaagttg	13080
gaggcaaccc	aaaattgcta	gaaagaaaag	gatgaaccca	gaggaaagaa	agataaatga	13140
agggaaacaaa	aaagacactg	cgaatcaaaa	tttctgaaca	catgagatct	gaagacagga	13200
aaaccagcaa	atcaatacct	tttgaaattt	cagtccactc	aagatgaaaa	taatggaata	13260
aactgaaact	ttaaataagt	ttgcttagga	ctttgaaaag	taagctaaac	aataaaatag	13320
aatgatgaa	acccaaataa	gtagacatta	atccattcaa	tattttactg	tcttaatatg	13380
ttcaggcgct	cttctggatg	ctagaactat	agcagtaa	caaacagaca	aaaatcacta	13440
ttcatgaggt	ttttattcta	atgatacaga	cagtaaaagg	gtaagtgcaa	ttaagaaatg	13500
aaggggctag	gtgcagtggc	tcacacctgt	aataggaaaa	taataggaaa	ataataggaa	13560
aaagaaaaat	actaatcaaa	gaaatatagc	agggcgggtg	cggtgggtca	cgctgtgaat	13620
cccagcactt	tgggaggcca	aggtggacgg	atcacctgag	gtcaagggtt	tgagagcagc	13680
ctgaccaaca	tagtgaaacc	ccgtctctac	taaaaataca	aaaattagcc	gggggtggtg	13740
gcatgcacct	gtaatectaa	ctactcggga	ggctgaggca	ggagaatcgc	ttgaacctgg	13800
gatgcggagg	ttgcagttag	ccgagatctt	gctactgcac	tccagcctgg	gcaacagagc	13860
aagactccat	ctcaaaaaaa	aaaaaaaaaa	agatagaaaa	aagtatacca	gaaaaatact	13920
aatcaaagaa	atatagcagg	ctgggcacct	tgttcacatg	agccagcagc	agcagcagta	13980
gtggcatagt	ggcagcatgg	tgggggcaca	cccatccgct	gcagcaggat	gtagcagggt	14040
ctggggtgcc	tgctttgtg	caggcattca	ccacagtggc	gaaggagtac	agcttccagg	14100
ggccccgtct	ggtgactatg	tgtgcgggtg	ctggtgggtg	gtgttagaat	ggggtgcagg	14160
caggcgcaat	ctgtatgtgt	tctctgtgca	ccacaggcag	gggtgggtcac	tcaagtcggg	14220
ggaggttccg	ctggtctctg	tgctagtgtt	cattcccattg	gcagtgttgg	tgcaagggca	14280
tgccagcaaa	gcaatgtggg	gggttgctgt	gggcccaggca	aaacagcgtg	tagggaggga	14340
gtgggtggcc	tggtgtgtgg	ctgtgggggc	tgtcctgctg	tagttctctt	gatggtcagg	14400
catgggtccac	cagcacagaa	actatgatgt	gagccccag	gacacccaag	gctgtttgac	14460
aggcaggctc	aatcaggcct	gggccccagg	aggggccagc	agaccaacgg	atgctcatgt	14520
cagaccggcc	tgtctgatgg	gcaagaccac	gtaacagagt	tcagggtcaa	cacttccctc	14580
agggctaaag	tctcctatgg	gagcatgttg	agcctagaga	gatgggttat	cctggccatg	14640
cttcgctaca	gatgctccca	caccaaacc	tctgggctcc	tcttcagcag	acgtgctgcc	14700
cctaccagtt	ctctgagcag	ctatccctgc	caactcaagg	gtccttggtg	gtcagggggt	14760
ctcctgccag	gattccagag	gcacgcagtg	agagtgggtt	gtccttacc	agttcaactt	14820
acctgttccc	tcagagtttc	tgagggccag	gaatgagtcc	tggtgcatag	tagcccatg	14880
cagggtccc	agcttccctc	tgcttcagcc	tagcttctgt	gtcctccctt	tgttcattct	14940
ggtgccttcc	ctctgaagat	ctgttaggag	tataacagtc	atctcagtc	ctcagtggca	15000
gctgttccat	ctggttgcat	ctagtggcc	accttgcccc	cattttcacc	caagaaaaca	15060
ttttataaat	attttttaaaa	ccccaccaa	atgataaaat	aatcatggac	atgtatgatt	15120
gcaaaagagc	ctcaacatat	ataaagcaga	agatacaatc	acagagaatt	atagggagaa	15180
ataagcagca	attgcttaag	attttaaaac	aaatttcttt	cagaaaatga	tagtccaagc	15240
atcaaatttt	ttaaaattat	ttttaatata	tatttttgtc	cacttaggct	gctataacag	15300
aatactattg	actaggtagt	atgcagacta	tgttgtctga	ccaaaagata	atgaaaaaaa	15360
actatgtatg	tttagaaaat	gaaagtaaac	tcttgacctc	atgttccgcc	tgctcggat	15420
tgagaccatc	ctggcaaaaca	tggtgaaacc	ccgtctctac	taaaaatata	aaagttagcc	15480
aggtgtgggtg	gcaggcacct	gtagtccag	ctactcggga	ggctgaggca	ggagaatcac	15540
ttgaatctag	gaggcagacg	ttgcagttag	ccaagatcat	gccactgtac	tccagcctgg	15600
tgacagagcg	agattccatc	aaaaaaaaaa	aaaaaaaaaa	aaaaggtaaa	ctctttagta	15660
cttaattcat	cagaaggaaa	gttatgtaac	atttatacct	taaagacaac	ttaaataacta	15720
cacatcaaaa	ccacaggggt	aggttttagga	tatagaaaac	tgcaaaagaa	ctcatttcca	15780
ctctaaccat	gagaaaaagc	tggaataatcc	acaaaaccat	gactttttct	aaaaccatca	15840
tagagctaata	tttaaaggca	atcaagtaata	ctgaatagca	aagagaaaca	agattctcca	15900
aggagagaaa	gcacattaac	gatttcacat	ttagcaaaag	ggaagagaaa	gggtggccatc	15960
atatcaatgg	gaaagaagaa	atcaactaaa	ttgttttaaa	ggccatatat	gggttagtgt	16020
gtcagtttgt	cataggtggg	ggcctcagac	accaagttag	tttgactcc	cttgtagggc	16080

ttcactggat	gctcaagaaa	atgactgggg	gcaggagaga	agactgaaga	aatccccctc	16140
acccaccacc	cacagcagtg	gttcaaatgt	tcatgtgatt	agtagattct	tggcgacagg	16200
cataaagtgc	aatttttctaa	ccccttctct	cctacaaatc	aaaagtctta	aaacattggg	16260
gaggatcatc	aaactctttt	gtccctggac	acaggcaaag	aattattggt	tttaggggag	16320
ggccagaaga	aaagcttggt	tgcttcttgg	taacagatag	gaaactatcc	caataccaga	16380
acaaaggcaa	agatccattg	ctgctggaat	ggtaagggag	gaagggtaaa	ggaaaaaact	16440
ctttgccact	gtaggaagga	cagggaaatt	cttgggcaaa	ggaggcttca	ttgatatcaa	16500
gcagattatg	agaggaagtc	ctggaagggg	gtaggaaact	gtgtccctag	accaatcaca	16560
aagataaggc	agagctgggt	gccatgagag	gaaggaaaag	aataatgagg	aagtcccact	16620
actgagacac	aggtcctgtg	cctctcccc	aagcacaaga	ccttagtagc	acacctgtag	16680
aggaatctga	agtttgtggt	gcactaaaga	cagctctacc	aacaacaaaa	cccaaaccca	16740
gctcagccaa	ggcaaacaaa	agctgagaat	ttgttgcaag	cagacctgtg	ctaccagaaa	16800
gattaaagga	tggtcttcac	gtcgtatggt	ctcataagtg	ggagctaagc	tatgaggatg	16860
tgaagccata	ataatgacac	atggactttg	gggactcggg	gaaaggggtg	taaggggggtc	16920
aaggataaaa	gactacaaat	tgggttcagt	gtatgctgct	cgggtgatgg	gcgcaccaaa	16980
atctcgcaaa	tcaccactga	agaacttact	catgtaacca	aataccacct	gttccccaaa	17040
aacctatgga	aataaaaacac	acacacacac	acgaaaagaa	ataaataatt	cttcttttga	17100
gaagtctgaa	aaaaagggat	ttcttcaggc	agaaggatta	tattgcagag	aaacttgtat	17160
ccacaccaaa	aaatgaatag	tggtggaagt	agtaaaaatg	aaggtaaata	taaaagatat	17220
ttcttcttgt	ttgtaattgc	tttgaccac	atattatata	tatatgtcta	tatatagaga	17280
gagagactgt	ctatatatat	atagtctatt	gatttctgaa	aacattgcca	agataattca	17340
atggagaaa	ggtacacttt	ttaaacacat	gatacgagac	aattggacaa	ccatatgtga	17400
aaaaatgagc	ctggacctat	acttggtatc	atataaaaat	ttaactcaaa	atgaaacaca	17460
gatctacatt	taagacctaa	aaccataaca	tttctagaag	aaaatcaaaa	agcttttgtgt	17520
gttaggttag	aaaactattt	cttagttaag	actcaaacaa	atatttttaa	tggttgtaaa	17580
ctgagcttta	tcacaaaact	tctattattt	aaaagacatt	gtgaaggatg	aaaagacaaa	17640
catacaataa	aataaaaataa	ttgaaaagca	catatctcat	aaaggattct	tgtatccaga	17700
atacataaca	cacatgtagc	agacatatca	ccgaagagtg	aaacaaataa	gcacatgaaa	17760
agatgcttaa	catcactggt	caccagacaa	atgcaaatta	aaactgtagt	gaggtagaaa	17820
tagacaacta	ctagatttaa	taaaatgttt	taaaagccca	caaaactact	gatacccagt	17880
cctggtgaat	atgcagagta	atggaaaact	ttatacattg	ctggtagaaa	tgtaaaattt	17940
gtacttttga	agtagtttag	tagtttctta	taacattagt	aaacttaaac	ctatcatatg	18000
gcccagcaat	tatatTTTTA	agtatttact	cctgaatggt	tatagcagtt	ttattcataa	18060
ttaccaaaaa	ctggaacaaa	ccaaaatgtc	taccaactat	agaatggaca	aacgactctt	18120
tgtacatgta	tatcatataa	tacttagtaa	aaaaaaaagaa	tgcatgaaac	acaacagcac	18180
agacggatct	ccaaagcatt	gagctaaata	agaagaaaac	gaaaggggtc	atactacatg	18240
atttcccttat	ataacattct	gaaaaagaca	aaacaataag	aaaagaattc	agttcagtg	18300
ttgccaggga	tcggggctgg	gaggatgtaa	ctgagtagct	taggttcaaa	atgcattttg	18360
agactttttt	ttcttctttt	tcttcttttt	agccttgaaa	cataccttaa	tactctttgt	18420
ttccctgcct	tcccaccaga	cactcttggt	cactggtagt	ttatctaatt	atgtgcccag	18480
aagttgcagg	ggctaactct	gagataaacc	aggcatggaa	accaggtgtg	gaaattctag	18540
agattacctc	agagcagtta	gtcaacagcc	tcaccattgt	tgagatgatg	ccagcctgca	18600
ctccaagtgg	accatgactc	aggataacca	gtggaacaa	acacacagac	ctcgtaccca	18660
gcaccattcc	tgcatgcctt	ccattccaag	ttccccctct	taaacccctg	tccacggcct	18720
aaagtttgaa	atagtctggt	aagagcacga	gtctggacat	tccccatctg	ctagcgtttg	18780
aataaaaagct	gtttcccttt	ggtcacacct	catttctcat	actttgactt	ctaacagtga	18840
gcagttgaac	ttgagtcagt	tacaggagga	ggaaattgac	tgcaaagaaa	tacgagaaaa	18900
ctttggtgag	atggaaatat	tttatatctt	ggttgtggtt	gaggttacat	agctgtttat	18960
attgatcaaa	actctagaac	aatatatctc	aaacgagtgg	attttactgc	atgtaaatta	19020
tacctcagta	aacctaaact	taaaattcta	agatacagct	ctcgcaatat	ttggaaggcc	19080
aattttgcagt	cttaaatgaa	cctataaaaa	ccaaggagct	tttaaaaaaa	tgaattatga	19140
tttaactcaa	gagtttgaa	aataacaagt	agaagaatgg	aaacaaatgt	aagagcaaaa	19200
gttaatgaaa	tgaaaaatgg	gagaagatca	acaaaaataa	aggttatttt	tactagtctt	19260
tcaaaaaaact	aataaacatg	taataagaga	gatgggacag	aaagagatta	tacaaacaag	19320
caatattagg	aataaaaaaca	tgattatctt	agataaagta	gaaaatgcta	taagtagctt	19380
tatgtcaatg	gaggctaaaga	ctagttgcag	gaagaataag	aaataggata	ttggtgtgat	19440
tgagattat	ctgtctccca	caaaacacta	atcaattaca	aagaagaaaa	ttatgacttt	19500
acagtgaaga	aacttggcag	acaccaatat	gacaggtgat	gaccaatgtt	accagtgggtg	19560
ggaacagtca	accgcatatg	tccgtactat	ggctgatact	cttacaaggg	catagtttca	19620
tttccatgat	attcctgcca	tgaatgcatg	acctgagtgt	gatcataagg	aaacatccag	19680
ctcaaggatc	actctacaaa	aggttaaggcc	tgtactcttt	caaagactaa	ggagctttttt	19740

gagattggag	aaaactgaag	agacttgata	actgtattag	tccattttca	cgctgctgat	19800
aaagacatac	ccgagactgg	gaagaaaaag	agttttaatt	ggacttacag	ttccacaggt	19860
ttaactctgt	gcacaaacta	gtcagtcac	tgaaaaggat	aacagacagg	tgagtttgtg	19920
tcctttgatt	gcttaggata	tggtgcta	ttgctgaact	gaagctgcaa	gagccttgtg	19980
tttttgagca	tctagtggga	aaagtcttta	cctctggttg	tgtgagtttg	agatatattc	20040
ctacctcagc	gggggtggag	ggggagggtta	taagtaaaat	aaattagaag	actctttaaa	20100
gagtaccgtt	atgattgttt	tgaggaatg	tcaccactct	ctcctcaggg	attttaggca	20160
atgtctggag	acattttggg	ctgttacaat	ttgggggtgc	ttttggcatc	taatgggtag	20220
agatttggtg	tgctgccaca	cagctcaca	tgctcaggac	cgccctgcat	gacaaaacaa	20280
ttatctggct	taaaatgaca	atcgttttag	agaaactgaa	aagcacttat	ataaatctaa	20340
tattctcaac	atttctcaca	cataaattga	atgtctaata	ctttaaatgt	gatagcctgc	20400
ttaaaaaaa	aaagtccttc	tcacagaagc	tgctagctca	aaagcacttt	aaaaaaaagc	20460
acttagaaaa	aaaaaaaaaa	acaagaaatc	aagtctcatgc	aattaaacta	gactgataat	20520
ttgggtttta	aaaataactg	tatcaggccg	tgtgtagtgg	ctcatgcctg	tactctcagc	20580
actttgggga	ctgagttggg	tggtctctct	gaggccagga	gttcaagacc	agcctggcca	20640
gcatggtgac	accccgctct	tactaaaaaa	aaaaaacaaa	aaaacaaaaa	aacattagct	20700
gggtgtgggtg	gcacatgcct	tttaattccag	ctactactgg	ggaggctgaa	gcacgagaaa	20760
tgcttgaacc	tgaggagacag	agtttgagct	gagccaagat	tgccaccactg	cagtcagccc	20820
tgagagacag	agtgtgagctg	tttccaggaa	aaaaaaaaaa	aaaaaaaaaa	acacaaaaaa	20880
agtcgtatat	ttttctgatt	atatcagtg	gaagaaaaaa	tacaagtata	caagttttat	20940
tccttttaaa	aatatggatt	gtttacataa	aggtaatttt	gtttttgttc	cttttttttc	21000
agggttcagga	atacatgtgc	aggtttgctg	tataggtaaa	ttgcgtgtca	tgagagattg	21060
gtatacagat	tattttatca	ctcaggtaat	aagcatagcg	ccgggtgggt	agtttggtga	21120
tcctcacctt	ccttcgccc	ttcactctta	agcaggccct	agtgtctctt	gtttccttca	21180
ttgtgtctat	atgcacttaa	tgtttagctc	ccacttgtaa	gtgagaacat	gcagtatttg	21240
gttttctgtt	cctgtgttag	ttcacttaga	ataatggcct	tcagctccat	ccatgttgct	21300
gcaaaaaaca	tgatcttggt	cttttttatg	gctgcgtagt	aatccatggg	gtatatgtac	21360
tacattttct	ttatccagtt	caccattcgt	gagcatctag	gttgattcca	tgtctttgtc	21420
gttgtgaata	gtgctgtgat	ggacatatgt	gtgcatgtgt	cattatggta	gaattattta	21480
tattcctttg	ggtatatata	caataatggg	attgctgggt	tgaatgggtga	ttctgctttg	21540
tggtctttga	gaaatcacca	aactgctttc	cacagtggct	gaaataagtt	acattcccac	21600
caacagtgta	taagtgttcc	cttttctctg	caaccttgcc	agcatctatt	attttttgac	21660
tttttaataa	tagccattct	tactgggtgtg	agatgttatc	tcattgtggg	tttgatttgc	21720
atttcgaaga	gaattgctac	tttgaatttc	tgacatttct	tatacagatt	taatctgata	21780
agctaataatt	attcctacgt	aatatttagg	atgaggaaca	gtgaataaatt	ttgtttaagt	21840
ggattgggtt	ataattctga	caaacttttt	tttgttattt	gtttgttttg	gtttgttttc	21900
ttcttagaga	caggtctcgc	tctgttgccc	aggctggagc	acagtgggtgc	tatcatagct	21960
caccgtaacc	tcaaaactcc	gggtataagt	gatcatccta	tctcagcctc	ctgagcagct	22020
aggactacag	gtccatgcc	ccatgtctgg	ctaatttatt	tgttttgtaa	agatgggggt	22080
ctcactttga	tgcccatgct	ggtctcaaac	tcctggcctc	aagcaattat	ctggccttac	22140
cctcccaaag	tgctggaatt	gcaggcatga	gccactgctc	ctggcctctg	acaaagtttt	22200
taatatcaac	agtacattag	gggcctccag	acctgggccc	ccagcacagc	ttcccaggcc	22260
ctgcctgac	acttcaatcc	gttgagctc	tgcatctctc	tgaggaggaa	atcccagaga	22320
ccatccacag	gctgtctgcc	attgccactg	cagtggtaac	cacctttgct	gccctctggc	22380
tggggaagga	acaaagagcc	taattgcttt	gctggcagct	cccatatgtg	gaggagccca	22440
gtctctcttt	cctataatcc	ctcaaccac	tgcttttctc	caggtagggc	ccccagcttg	22500
ggcctgtgac	acagcctgca	gtaggtttgt	gtttttctag	ggtggagctt	ctgcaggcaa	22560
ctgacagccc	ctctgttact	gtagcagtat	ctgcccttcc	tgccatcagg	ctggggaagg	22620
aaaaaatagc	ctgagtgtct	tactcacacc	tccagcacgc	catagccgcc	ctgcagagaa	22680
gaagtcagac	tcttccccat	gggccttcca	tccccctgct	attcaccag	cagggatccc	22740
agacttgagc	ccacagtgca	gcctcctcac	cttgggctga	ttgttctgat	tggcagtggt	22800
cctgcgtttc	tctggggcag	agacccaaga	gacgagtga	aggccctcta	ccattgccac	22860
tgccaagggt	cctgcccctg	ctgcccccaa	gctggggagg	gaacaaaaag	cctgagcttg	22920
ccacaaagct	gtgttggtga	ggcctggagt	gccaagccga	gatctgtggc	cagcactcaa	22980
gtggaagagg	agcccacatt	cagagagcac	tgacagggag	catggctgcg	tatgtgagga	23040
aatgaaagag	gagccacgtg	gctaagagct	accggcccta	tggttagcgc	catctactgg	23100
atcacagctc	aaacttcaac	atcaaaaaata	cttctgttag	tagaccctgt	gaaaccaagg	23160
acaaaaatcc	agccccaaat	aaacaccctg	cacaaagcct	cagccctctg	aaaacatcca	23220
gaaacaaatc	caactggcta	tattgaaatt	acaccacagt	taaggaacat	cagcacacag	23280
atgagaaaga	accagtacaa	gaactcaggg	aactctaaaa	gccatagcgt	ttgcttacct	23340
ccaaatgact	gcgctagctc	cccagcaata	gttcttaacc	agaatgaaat	ggctgaaatg	23400

acagacatag	aattcagaat	ctggatggca	atgaagatca	ttgagattca	gtagagagct	23460
gaaatccatt	ccaaggaatc	taagaaatcc	agtaaaatga	ttcaagagat	gaaagatgaa	23520
atagccatat	agggaaccaa	actgagctga	tagagctgaa	aaactcacta	caagaatctt	23580
ataatacaat	cagaagtatt	aacagtataa	taaaccaagc	tgaagaaaca	atctcagagc	23640
ttgacaatca	gttcttcaaa	ttattcaatc	agacaaaaat	aaggaatfff	tttgaataag	23700
caaaacctct	gagtaatatg	ggattatgta	aagagaccaa	atcaatgacc	cattgacatc	23760
cctgaaagag	aagaagagag	agaaagcagc	ttggaaaaca	tatttgggaa	tattaaccat	23820
gaaaatttcc	ccaaccttac	tagaaagggt	gacattcaaa	ttcaggaaat	ttagagaagc	23880
cctgcaagg	actattcaag	gctatcacc	tgaagacaca	tagtcattag	attcttcaag	23940
gtcaacatga	aagaaaaaat	gttaaaggca	gctagagaga	aggggcaagt	caccaacaaa	24000
gggaacccca	tcaggctaac	aatggacott	tcaacagaaa	tcctacaagc	cagaaaaact	24060
tggggcta	agtcagcatc	cttaaagaaa	agaaattcca	accaagaatt	tcataatccag	24120
ccaaatgaag	cttcataagt	gaaggagaaa	taaaatcctt	ttcagacaag	caaagtctaa	24180
gggaattcat	taccaccaga	cttgcccttac	gagaggtttt	taagggagtg	ctaaacaggg	24240
aaatgaaaga	ccattactga	ccaccacaaa	aagacactca	agcatattga	ccattgaaac	24300
taaagcaaat	atgcaatcaa	gtcttcaagt	ctacataaca	accacctaac	aatacaatga	24360
tgtgatcaaa	tcagcacaca	tcaatactaa	ctttgaatgt	aaaggggcta	aaaatcccac	24420
ttaaagggca	tggagtggca	agctggataa	agaagcaaga	cccagtggta	tgctatcatc	24480
aagagaccca	tctcacatgc	aaggacacc	acaggctcaa	agtaaaagga	tgaagaaaga	24540
tctctcaagt	aaacagaaaa	caaaagagta	ggagctgcaa	ttcttatttc	agacaaaaaca	24600
gactttaaat	gaagaatgat	caaaaaggac	aaagaaggca	ttacacagt	ataaagagct	24660
cagttcaaca	agaagattta	actagactaa	atataatatta	accgaacact	ggagcactag	24720
attcataaga	caacttctta	cagacttaca	aagagactta	gataaccaca	caataatagt	24780
gaaagacttc	aatgcccact	gacagtattg	gacagatcac	tgaggcagaa	taactgacaa	24840
agatatttgg	gatctaaact	tgacacttga	ccaaatagac	ctaacagaca	tctacagaac	24900
acttcaccca	acaaaagcag	aatatacatt	cttctcatct	gcacatggca	tacactctga	24960
aattgaccac	atgctgagcc	atgaagcaat	tctcaactaa	ataaaaaaaaa	atcataccaa	25020
ccacattctc	agaccaccat	gcaataaaaa	tgaaaatttt	tatttctatt	attttatttc	25080
tattattatt	tatttaccaa	gaagatctct	caaaaaccaca	caattaaatg	gaaattaaat	25140
aatctgctct	ggaatgactt	ttgggtaaac	aataaaaatta	aggcagaaac	taagaaatta	25200
tttgaaatga	atgaaaatga	agatacaaaa	taccagaatc	tctaggacat	agctaaagca	25260
atgttaagag	gaaagtttag	gctgggcgca	gtggctcaca	cctgtgatcc	cagcagcact	25320
ttgggaggcc	aaggcaggcg	aatcacaatg	tcaagagatt	gagaccatcc	tggccaacaa	25380
cgtgaaactc	cgtctctact	aaaaatacaa	aaattagctg	ggcgtgggtg	caagtgcctg	25440
tagtcccaac	tactagggag	gctgaggcag	gagaatcact	tgaacccggg	aggcggagct	25500
tcgagtgagc	cgagatcatg	ccactgcact	ccagcctggt	gacaattaaa	tggaaacctca	25560
cctgctcggg	aggctgaggt	tggagaatgg	catgaaccca	ggagacagag	gttgcagtga	25620
gccaaagatcg	cgccactgca	ctccagcctg	ggtgacagag	caagactccg	tctcaaaaaa	25680
aaaaaaaaaa	aaaaaaaaatt	aaataagtga	gaaagatctc	aaattaacaa	cctaacttta	25740
cacctagaga	aactagaaga	aaaacacaaa	gccagcccca	acgctggcag	aagaaaagaa	25800
ataatcaaaa	gcagagctga	actgaacaaa	atggagatga	gaaaagccat	acaaaagatc	25860
aacaaaacca	aaagctgctt	ttccgaaaga	ataagattga	tagactgtta	gctaaactaa	25920
taaaaaaaga	gagaagatcc	aaataaacgc	aatcagaaat	gacaaagagg	acatgaacac	25980
caaccccata	gaaatacaaa	aaccatcaga	aactattatg	aacatctcta	tgcacacaag	26040
ctagaaaaac	tacagcaaat	gggtaaattc	caggaaacat	acaacctcca	aagattaaac	26100
cagaaagaaa	ttgaaacccc	aaaaagatca	ataatgagtt	ctgaaactga	atcagtaatg	26160
aaaatcctac	ccgaccttg	accacatgga	ttcacaaactg	cattctacga	aatgtataaa	26220
gcagagctgg	taccaatcct	actgaaacta	ttccaaaaaaa	ttgaggagga	gggtatcctt	26280
cctaactcat	tctatgaggc	cagcatcatt	gtgatacaaaa	aacctggcag	agacacaaca	26340
aaaaggagaa	ctttaggtca	atatctctgg	taaagatagg	tgcaaaaatc	ttctacaaaa	26400
tactaaca	ccaagtccag	tagcatatca	aaaagcgaat	ccaccacaac	caagtaggct	26460
ttttccctgg	gatgcaagg	tggttcaaca	caggtaaatt	aataaatgtg	atttatcaca	26520
taaacagaac	taaaaacaaa	actaaatgac	catctcaata	aagaagaaaa	ggcattcagt	26580
aaaactcaac	acactttcat	gttaaaaacc	ctcaacaaac	caggcgttga	agatacatctc	26640
ctcaaaaata	taagagccat	ctatgacaaa	cccacagtca	acatcatatt	gaatgggcaa	26700
aagctgtaag	tattccctt	gagaactgga	acaagacaag	gatgcctgct	cttatcactc	26760
ctattcagta	cagtactgga	gctcctagat	agagcaatca	ggcaagagaa	agaaataaaa	26820
gacatcaaaa	taagaagaga	ggaagctaaa	ctatctctct	tcacagaaaa	tatgattcta	26880
tacctagaaa	accctacagt	ctctgcccaa	aatctcctaa	tctgataaac	aacctcaaa	26940
tctcccagat	ctgataaaca	acttcagcaa	agtttcagga	taaaaaaaat	cgatgtacaa	27000
aattcaggag	catttctaca	caccaataat	gtcccagctg	agagccaaat	taaaaaaaaa	27060

aatctcattc	acaataacca	caaaaagaat	aaaacaccta	ggaatacatg	tattagtccg	27120*
ttttcatgct	gctgataaag	acatacctga	gactgggcaa	tttgcaaaag	aaagagggtt	27180
aattggactt	agagttccat	gtggctgggg	aaagctcaca	atcacggtag	aaagcaagga	27240
ggagcaagtc	acatcttacg	tggatggtgg	caggcaaaga	gaggagcact	tgtgcatgga	27300
aactcctggt	tttataatca	tcagatctcg	tgagacttac	tctctctcat	gagaacagca	27360
tggaaaatac	ctgcccccat	gattcaatta	cctccctcca	ggtccctctc	acaacacgtg	27420
ggaattcaag	atgagatttg	ggtggggaca	cagccaaacc	atatcaatac	atctaaccag	27480
ggaagtgaag	gattttctata	atgagaatta	caaaacagtg	ctgaaagaaa	tcagagacaa	27540
aacaaacaaa	cggaaaaaca	tcccatgctc	atggacagga	agaatcaata	ttgttaaaat	27600
ggtcactactg	ctcaaagcaa	tttacagatt	cgatgctggt	cctatcaaac	tcctcacatt	27660
ttccacagaa	ttagaaaaaa	actattttta	gattcatttg	gaacaaaaaa	agagcctgta	27720
tagccaaagc	aatcctaagc	aaaaagaaca	aagccagaga	catcacacta	cctgacttca	27780
aactatacta	caaggcttcc	gtaacaaaaa	caggatggtg	ctagtagaga	aacagacata	27840
taaagcaatg	gaacaagtta	gaggacccac	agataaagtc	acgcatctgc	aaccatatga	27900
tcttcagcaa	agctgatgct	aacaagcagt	gggaaaagaa	ctcactagtc	aaaaaatggt	27960
gctaggataa	ctggctagcc	atatacagaa	tgttgaaact	ggaaccctat	gtttcaccat	28020
gtacaaaaat	gaactcaaca	tggattaaag	actgaagtgt	aaaacctaaa	agtataaaaa	28080
ccctagaaga	aaacctagga	aatactcttc	tgggcatcag	acctgacaaa	gacttcatga	28140
tgagaattcc	aaaagcaatt	gcaacaaaaa	caaagactga	caataggggac	ctaattaaac	28200
taaagagctt	ctacacagca	aaagaaacta	tcaacagagt	taacaggcaa	cctagagaat	28260
ggaagaaaaat	ctttgcaaac	tatgcatctg	acaaaagtct	aatattcagc	atctataaag	28320
aacttagatc	aacaagcaaa	aatcaaatga	ccccattaaa	aaaatggcaa	aggacatgaa	28380
cagatacttc	tcaaaagaag	acatacacac	caataagcat	atgaataaat	gctcaatatc	28440
actaatgatt	agagaaatgc	aaatcaaaac	cacaatgaga	taaccatctc	acactagtca	28500
gaatggctac	taataaaaaa	tcaaaaaata	acagatgctg	gtgaggttgt	ggagaaaagc	28560
aaatgcttat	acactgttgg	tgggaatgta	aattagttca	gccactgtgg	aaagcagctc	28620
ggagatttct	taaggaactt	aaaatagagc	taccatttga	cccagcaatc	ccattactgg	28680
gtatatactc	agaggaatat	aaatcattct	gccaagatca	taaagacaca	tgcatataag	28740
cacatgcctg	catatgttca	ttgcagttct	attcacataa	gcaaagacat	ggaatcaacc	28800
taaatgcccc	tcaatggtag	actggataaa	gaaaaagtgg	tccatatata	ccatggaaca	28860
ttatgcagcc	ataaaaaagg	acaagatcgt	gtccttttga	gcaacatggg	tgggggttga	28920
agtcattatc	ctaagcgagt	taacatagggt	acagaaaacc	aaataccaca	tgttctcact	28980
gataagtggg	agccaaacat	tcactttaag	attctgaact	atattcaatt	aagtcataaa	29040
taatctttga	atgctttgat	aattttcttt	tttttttttt	ttttgagatg	gagtctcgct	29100
ctgtcgccca	ggctggagtg	cagtggcaca	atctcggtc	actgcaagct	ccgcctcgcg	29160
ggttcacacc	attctcctgc	ctcagcctcc	cgagttagctg	ggactacagg	caccgcgacc	29220
cacacctggc	caattttttt	gtatttttag	tagagatggg	atttcaccgt	gttagccagg	29280
atggtctcgg	tctcctgacc	tcgtgatccg	cctgcctcgg	cctcccaaag	tgctaggatt	29340
acaggtgtga	gccatcgtgc	ccggcctgct	ttgataattt	ctaagtaata	tagaatcccc	29400
agaccaatct	cagttgttat	ttcgtacaca	tgcttttgga	ttttattttt	ataagttata	29460
gagtggttct	ttgagtctta	ctaattgagcg	tgtaattttt	ttccacttca	atgtgtgaaa	29520
gggatgtgtg	tggacatatg	aggttgcatt	atgtgaactt	atgagctttt	ctgggctact	29580
aaatgcttct	tatatgtaac	aaatagttct	caattgccac	ttcttagtag	tttccatgaa	29640
gtaaaagtag	cttctttgat	tacagttcta	aataatacaa	gtggtagaga	ttattgcagg	29700
tgcagtgtga	cagagaagta	tgaagagaac	actattattt	aaagcaaaag	gtttggtgta	29760
gaatgttaaa	gaagatagta	aaggatgaaa	cttggatggt	gaggaaaatt	aaagtcatgc	29820
aaacagtga	ctttatttgc	cttgggtttat	cataactaca	gataatgagc	ctgaaaagaa	29880
gcaataaaaat	ttattacaac	tgtttagtaag	ttttgcccaa	tttttatgag	ttttacgagt	29940
agaaatttaa	gataaagtaa	aaatgtaaag	tttttaactg	cctaaagtgt	aggttaatac	30000
aaaattataa	tttatttttt	cccttatggt	aaaatgataa	attggtttca	gagccttcag	30060
tctgttggtta	accacaggca	ggttattttt	ttaccttcaa	tttaattctac	tcagataatg	30120
aaactttatt	tttttgagac	agggctcttg	tctgtcaccc	aggctggagt	gcagtgggtc	30180
caacatggat	cattgcagcc	ttccattcct	gtactcaagc	aatcctccca	cctaagctcc	30240
ctgagtagct	gggactacag	gtgtgagcca	ccacgcctga	gtaatttttt	ttttttttta	30300
gagacattat	ctcactatgt	tgctcaggct	ggtttcaaac	tactgagctc	aagcgtcaag	30360
tgctctgccc	acctcagttt	cccaaagtgc	taggggtata	ggtgtgagcc	actgtgcccc	30420
gcctgcaatt	ttatatctca	caagaaaagt	tttctgattt	tgtcatggcc	ttgattacag	30480
tacttaaaaa	caaaaacaaa	aaacaaagta	ctcatgctga	aaaagctgaa	gttccttaca	30540
attgtgttat	cttttaggat	ttttttcacc	ctatattttt	cttttctcta	gtgtcaactc	30600
ctgtgccaac	cttgatttat	aggtagtcaa	gttaaaaata	ttcattgttc	tcagattttc	30660
atgatttttt	cttaatcaag	tgacaaaatt	tgctatgata	actttttgat	tatgcttttc	30720

caagatcgaa	ccctaaatta	tattttcaaa	aattcaagat	gtcttttaga	cctaactgtt	30780
tttgagtttt	cccaagaggg	ccctaaaaat	catgaagatt	tattcttttt	tttttttttt	30840
ttgtgagata	gagcctcact	ccattgccag	gctagagtgc	aatggcgtga	tcttgccact	30900
agattttattc	tttactcaaa	aaggaatggt	aaaaataatt	gaaattgcct	gatatatttc	30960
atattttctga	agtagcagaa	cattattgta	agaactgcat	gggaaaagct	gtcaaattta	31020
aagttcaacc	atttctagtt	caatttttag	gtaaatagta	ccaatataaa	catgtttcag	31080
agattatgca	cttagcataa	tttttcaatg	tcttcactat	ccatagtatg	ttctttcctt	31140
tgaggaaaaat	attgaccaa	tcctttttta	acagttatat	attgtatacc	agtagagagt	31200
ttttctcttc	tccattttca	tttagcatca	ggcattcagt	attatcatcg	gcaggttatt	31260
tctgcttttc	tctcatgctc	acctgaagcc	tttgctataa	gctgtagggt	agaaagggtc	31320
ttggctgggc	gcagtggctc	acagcacttt	gggaggccaa	gatgagagga	tcgcttgagg	31380
ccaggagttc	aagaccagcc	tggtcaacag	agcgagatcc	catctctcag	aaagaaaaaa	31440
aaagaaagaa	agaagaaaaa	aagaaagaaa	caaaggaagg	aaggaaggaa	aagaaagaag	31500
gaaggaagga	aaagaaagaa	agaaggaagg	aaagaaagga	aggaaggaaa	agaaagaaaag	31560
aaggaaagaa	agagagagag	agagagagaa	tgaaagaaag	agagaaagaa	agaaagaaaa	31620
gaaaggaaaa	gaaaaaaaga	aagaaagatt	gcctcaatct	aaggaggaaa	cacttagggc	31680
attgcagaag	actatagaat	tgatatcctc	agctattgat	acgtcaagaa	attaagacag	31740
aggcagtga	aagtggatgg	atctgagaga	tatttaggac	tctgagggtg	attggatttg	31800
tggcacctat	ctgatatgat	ttggatgttg	tccctcccaa	atctcatggt	gaaatggaat	31860
cctcagtggt	gaaattaggg	cctgctggga	ggtgtttgga	tcattggggg	ggatcccttg	31920
tgaatagctt	agcacctgcc	ctttggtgat	gagcgaattc	ttgctctgag	ttcacccaag	31980
atctggttgt	ttaaaagtct	gtggcacctc	ctcctgtctc	tcttgctccc	actctcacta	32040
tgggacatgc	tagctttctg	ttgccttcca	ccatgattgt	aagctttctg	aggcctcacc	32100
agaagcagat	ggcaacacta	cgcttcttgt	aaagcctgca	gaaccattag	ccaattaaac	32160
atgttttctt	tataaattat	ccattttgat	ttatagcatg	caaaaatgac	cgaacacact	32220
atcataggta	taattatcaa	attcaaaaagc	attcagttcg	tgaatattaa	aagcttcagt	32280
tttgttctca	ctcagataga	aaaaaccatt	tcattgtctgt	caggatgtga	atcagaaaaa	32340
tgactgtggc	tggcagtggt	ggctcggtgt	tgtaatccca	acacattggg	aggctgaagt	32400
gggaagattg	cttaaagcca	agagttcaaa	accagcctgg	gaaaaatata	aagaccctgt	32460
ctctacagaa	aagttaaaaa	aaaaaatgct	tctggtaaag	tccaagaaga	aaacgataga	32520
tctgctcaaa	tgtctgaata	aagtattgat	aatatgaggg	ctttacacaa	aatcataatt	32580
aatcctttca	ataccctaca	tatagatatt	attgcttgca	ttttacagat	aaggaaaactg	32640
aggcttgggg	ggagaacctt	actcaggggtc	atacagctaa	taaaagtaga	attggctgag	32700
tgtagtgggtg	cacgcctgaa	attccagcac	tttgggaggc	tgagggtggga	gggaggcttc	32760
tgcccagggt	gcagtgaagt	atgatgacag	tgccactgga	ttcctgcctg	ggtgacagag	32820
tgggaccctg	tactaaaaaa	aaaaaataac	gataattaaa	aaaaaaaaaa	agaaaagtag	32880
actaggcata	ctaaccat	ttgtccagtt	acaaacactt	gattagagga	ccaaattttg	32940
atgctaagga	attaaaaaaa	aaaaaaagga	ttttaccctg	gaaagatgtt	aacattccca	33000
acattcctga	ccttagatcc	tgagccccct	ggtttaaagg	ccgcctctct	gaaccacttc	33060
cagttgcact	ttctccaagt	gtaaggaagc	tgttcacctg	caacctgtct	acccttctac	33120
atcatgggtt	ggctacctcg	aatccctgcc	caacagcccc	aggctacttc	ccggagtctt	33180
ttctctggct	agtccctctg	aggggtggcct	gtgagtcttg	agtgtacatc	tctatgtcca	33240
atgacaggct	gttagctctg	ctatgttccct	gcatgaaacc	ccaaggagac	tgagaattcc	33300
aaatgtaaat	ttggccttcc	aggctcattat	gaatgcatat	tcagactatg	taaggaaata	33360
gagtttattt	tattaaatac	tttcttagct	taatttataa	ctaccgtgta	acatttgatt	33420
cacatgtata	agggaggagc	ccaccctcca	tattgtctta	tgcctagggc	tgcgtcttgc	33480
tcctgtacac	ggatgacctt	ctgctggaac	atgccatggc	agttgggtgt	gcgaaggggg	33540
cggatgccct	gcttcagcac	ctggagaact	gtgtgtataa	ggtgtccaag	aagaaagctc	33600
agatctgcag	acagcaggta	cactacctgg	gattcgctat	tcggaaaagg	gagcgcagcc	33660
tggggtcaga	aagaaagcgg	gtcatctgca	gcctacagga	acctaaaacc	agaaggcaag	33720
taaggggaatt	cctgggagct	gtgggggttt	gcagattatg	gattccaaac	tttgctgtac	33780
tgggtcaagtc	tttgtatgga	gttacaagag	ggggcgacct	ggagtctttt	gaatggggag	33840
ctctacaaca	gcaagccttt	cgtgagttaa	aggaaaacct	tatgtcggcc	ccagtcctag	33900
gactaccaga	tttgacaaaag	ccctttacac	tgatgtgtct	agaaaagagat	aaaatggcag	33960
ttggagtgtt	aaccagact	gtggggccct	ggccaaggcc	agtagcctat	ctctcaaaac	34020
aactagatgg	ggtttctaaa	ggctgggccc	catgtctaag	ggccctggca	gcaacagccc	34080
tgtagtcaca	agaaggagat	aaactaacc	ttgggcaaaa	cctgaatata	aaggccccc	34140
gtgctgtggt	aactttgatg	aataccaaag	gacagcatca	gctaacaac	gctagattaa	34200
ccaagtacca	aagctggctg	tgtgaaaatt	cccacataac	cactgaagtc	tgtaacaccc	34260
taaatcccac	caccctgtct	ccagtatgag	agcccagtcg	agcataactg	tgtagaagtg	34320
ttggactcag	tttgttctag	cagacctgac	tttcaggacc	agccatgggc	atcagtagac	34380

tgggagttat	acgtggatgg	gagcagcttc	atcaaccac	aaggagaaag	acatgcagga	34440
tatgtggtgg	taacttttga	tgctatcatt	gaagccaaac	tgttgccaca	gggacgtcag	34500
cccagaaggc	tgagctcact	gctttaactt	gggctctaga	actcagtga	ggtaagactg	34560
taaacatcga	cactgactct	cgatatgcct	ttctaaccct	ccaagtgcgt	ggagcattat	34620
ataaggaaaa	gggccggtta	aactctgggg	gaaaggacat	aaaatatcaa	caagaaattc	34680
tacaattatt	agaggcagtg	tggaaacctc	agagagtggc	agtcatgcac	tgcagggggac	34740
accagcgaac	ctccacttca	gtggccttag	gaaactcccg	agctgactca	gaagctcaaa	34800
aagcagcatc	taccctttac	tgggcatcgg	tagcagcctc	cttactccct	caaacacctg	34860
acctggtacc	tacctattct	aaggaagaaa	aagaatgttt	caacacagaa	gggggcaagt	34920
aataaaaaga	ggatggatca	gactgccaga	tgggagggaa	gctgtgccgc	agttgctggg	34980
agccacaatc	atactggcca	tgcatgaaac	cactcatcta	ggtcaagagt	cacttgaaaa	35040
gttgttaggc	cgttacttct	acacttgcca	gcccttgcca	aagcagtagc	acaacggtgc	35100
gttacttgca	gacagcagaa	cgcaaggcaa	ggccccactg	ttctgcccgg	cctataagct	35160
tacggagtag	ctccttttga	ggatcttcag	gtggaattca	cagaaatgcc	aaaatgtaga	35220
ggtaacaagt	atttgcgtgt	tcttgtgtgt	acttactctg	ggtgggcgga	gtcttcccca	35280
acacgaaccg	aaaaggccta	cgaagtaacc	cttgtgtctc	tccgagacct	tattcctagg	35340
tttggactgc	ccttatgaat	cagctcagat	aacggggccg	cgtttgtggc	tgacttggtg	35400
cggaagacag	caaaggcatt	aggaatcact	tggaaagctg	gtgccgccta	ctgacctcag	35460
agtttcggaa	aggtggagcg	aattaatcgg	actatcaaaa	atggtttagg	gaaagcacgt	35520
caggaaacag	gattaaaaatg	gatacaggcc	cttctctatg	tattgtttaa	aattagatgc	35580
acccttctta	agaaaacagg	atactccctc	tatgaaatac	tgtatcatag	gcctcctact	35640
atactacggg	gacttccagg	cactccccga	gagttaggtg	acattgagtt	acagcgacag	35700
ctacaggctt	tgggaaaaat	tacacagaca	atctcgactt	gggtaaatga	gaggtgtcct	35760
gtcagcttgt	tctccccagt	tcatectttc	tttccagttg	atcgtgtgtg	gatcaaggac	35820
tggaaacgtg	cccctttgcg	gccatggtgg	aaaggacctc	agaccgtcat	cctgaccacc	35880
cccacggctg	taaaggtaga	aggaatcccc	gcctggatcc	accacagcca	tgtgaaactg	35940
gcagccgctg	aaacctggga	ggcaaaaacc	agcccggaca	acccctgcga	agtgactctg	36000
aggaggccga	caaacctgcg	tccagtcaca	cccgggaagt	gactggctta	cgcacggccg	36060
aagcatgagg	agaatcatct	tgggactcat	tttcttata	atttggactt	gtatagtaaa	36120
aacttccact	gattttcccc	gcatggagga	ctgctctcag	tgtatacatc	aggttactga	36180
ggtaaggcaa	caagttaaaa	caatctttct	gttctatagt	tactgtgaat	gcctaggaac	36240
tttaaaagga	acatgtttat	atactgacac	tcagtacaag	gtatgtagcc	taggaaacga	36300
ccggccagct	gtgtgttatg	acccctctga	gcttatccaa	cacgaaactg	aaaaggccta	36360
cgaagtaacc	cgtgtgcttc	cctgagacct	tattcctagg	tttggactgc	ccttacgaat	36420
tggcttagat	aatgggcccg	cgtttgtggc	tgacggtttt	tgaataaga	ttaagggctg	36480
aagactagtg	gggacgcgta	aatgatacaa	gtaaagtaat	agccagaaca	gaagagaaag	36540
gggtgcccaa	acacataatc	ttgaaatttg	atgcctgtgc	tgtcattagt	ggcagtaaat	36600
taggaaaggg	atgtggctct	tttgggaaaa	agccgatatg	actgaaaata	agtacatttg	36660
tcatgaatta	ggactgtgtg	gaaatgaaatg	tgaacactgg	tcttgtgtca	tttaggccac	36720
ttggataaaa	aaatgaaaag	gatccagtc	acttcagaaa	ggaaaaagtg	gcccttcctg	36780
tactaaggga	caatgtaacc	ccttagagct	agcaacaacc	aatccccctg	atccttgctg	36840
gaaaagaggg	gagcatgtga	ccttaggaat	cgatggggca	ggactggatc	cctgagtaaa	36900
tatcttagtt	cgaggagaag	tttacaaacg	ctctgtctcag	ccagtgtttc	aaactttcta	36960
agatgaacta	aatgtgccag	taccagaaat	tccaggaaaa	acaagaaatt	tgtttttgca	37020
attagccaag	catgtagccc	agtctctcag	tgtcacttca	tgttatgtat	gtggaggaac	37080
tgtgatggga	gatcaatggc	catgggaagc	ccaagaatta	gtacctacag	acccagttcc	37140
caatgaattc	ccagctcaaa	agagtcacct	tgataatttc	tggaccctga	agcctcaatt	37200
attggacaat	attgcatagc	tagagaagga	aaataattca	ctcacccctt	aggacaactt	37260
agttgtctgg	gacagaaact	gtataatggt	accacaaaaa	cagtcacttg	gtggagttca	37320
aatcacacag	aaaggaatcc	atttagtaaa	ttcccaaggt	tgcaaaccat	gtggacccac	37380
ctggagtccc	actaggactg	gacagccccc	actggattat	actggctatg	tgggcataga	37440
gcttacgcta	aattacctgg	ccagtgggca	ggtagttgta	ttactggcac	tattaaacca	37500
tctttcttcc	tactgtccat	aaagacagge	gaactcctgg	gcttcctgt	ctatgcttcc	37560
catgaaaaaa	gaagcatagc	tataggaaat	tggaaagata	atgaatggcc	cccagagaga	37620
atcatacaat	attatggacc	tgctacttgg	ggacagatg	gttcatgggg	atactagacc	37680
cccatttaca	tgctcaacca	aatcatatgg	ttacaagctg	tcttagaaat	aatcactaat	37740
atgggctggg	cgcgggtggc	cacacctgta	atcccagcac	tttgggaggc	caacgcaggt	37800
ggatcacgag	gtcaggagat	tgagaccatc	ctggctaaca	tggtgaaacc	ccgtctctac	37860
taacaataca	aaaaatttag	caggggtggt	ggcgggtgcc	tgtggttcca	gctacttggg	37920
aggctgaggc	aggagaatgg	cgtgaacctg	ggaggcagag	cttgcagcga	gccgagattg	37980
tgccactgca	ctccagcctg	ggcgacagag	tgagactcca	tctcaaaaaa	aaaaaaaaaa	38040

agaaaagaaa	gaaagaatca	ctaataaaac	cgacagagcc	ttgactattc	tggcctgtca	38100
agagactcag	atgagaaatg	ctatctatca	aaatagattg	gctcttgact	acttgctagc	38160
agctgaagga	ggggtctgtg	ggaaatttaa	ccttactaat	tgctgtctac	acgtagatga	38220
tcaagggcaa	gtagttgaag	acatagtcag	agatatgata	aaactgtcac	atgtgcccac	38280
gcaagtgtgg	catggatttg	atcctggggc	catgtttgga	aaatgggtcc	cagtgttagg	38340
aggattttaa	actcttataa	taggagttat	attagtaata	ggaacctgct	tactgctccc	38400
ttgtttgcta	cctgtacttc	ttcaaagtat	aaaaagcttc	atcgctacct	tagttcacca	38460
aaatgcttca	gaacaactgt	actatatgaa	tcactatcga	tctgtcttgc	agaatacat	38520
gggtagtgag	gatgaaagtg	agaactccca	ctaattgact	gaggttctca	aagtggggga	38580
ataagggagg	agaccacccc	tcataattgtc	ttatgcccac	tttctgcctc	caaagaaaaga	38640
agtaaaaatt	aaaaggcaga	aatggaatcc	acaggcagat	agcccagcat	cacgccctgg	38700
gcctggtagt	taagaatcaa	ccccgtacct	aactgctcgt	gttatctata	gatttcagac	38760
attgtatgga	aaaacattgt	gaaaatccct	gtcctgtttt	attccgttct	gatgaccggt	38820
gcatgcagct	cccagtcacg	tacccactgc	ttgcttaatt	gatcacgacc	ctctcacgcg	38880
gaccccggtta	gagttgtaag	cccttaaaaag	ggacaggaat	tgctcactcg	gggagctcgg	38940
tttttgga	cgtgagtcctg	ctgatgcttc	cagctgaata	aagccctttc	cttcacacac	39000
tccgtgtcgt	ctgaggggtt	cttgtctgtg	gttcgtcccg	ctacacgtac	agggtaatgg	39060
tttaatat	catgaataat	attaattgta	tttcaaaatt	aatgtgggtta	aatatactga	39120
tatactttaa	tacatttttt	caacagttta	atgttttggc	atagataata	aatacaataa	39180
ggaatttgca	tttatcta	gacaaaatgt	taacatttta	aactctactc	agttataaac	39240
taaaactcaat	tttaaaatgt	ttaaaaaatg	tgtggatgac	acaaaaacaa	accttcatgt	39300
ttgtttatat	tctcccttta	ttaatcctct	ttaaggatta	attaagccta	caaaattcta	39360
ctttaataat	agttgttctc	cttaagagtc	ccttaaaact	ttttttttta	attaaataac	39420
taggccaggt	gtgggtggctc	acacctgtaa	tcccagcact	ttgggaggct	gaggtgggta	39480
gatccctga	ggtcaggcat	tcaagaccag	cctggccaac	atggtgaaac	cccgtctcta	39540
ctaaaaatac	aaaaaaatta	gccaggcatg	gtggcgcag	cctgtactcc	cagttactag	39600
ggaagctgag	gcaggagaat	cacttgaacc	caggaggtgg	aggtttcagt	gagccaggat	39660
cacaccactg	cactccagtc	tgggcaatgg	agcgagactc	cgttttgaaa	aaaaaaaaaa	39720
gaaataagt	gtattgtgcc	aaaacaagtc	taataggaaa	aacaatcaag	ctcataccct	39780
ataaatatat	atctaagata	ttaggaccca	aaagaaaagg	aaaattatgc	agggtcactt	39840
cacattctac	atgacctcta	cctagatatt	ctcattta	tttaaatcac	attatcattt	39900
ccgaaagccc	aaatttaaaa	tagtaaaata	actaatgcat	ttaacaccta	gtgcctagag	39960
tttgggtctgt	aaagctattc	tccactaaat	agaactaaaa	gttcttggag	aatttcaatt	40020
cctagagaaa	aaaaaagaaa	agaaaaacct	ttaagggtgga	cctaagtgat	cttgcacta	40080
gaatgagggga	tttttttaaa	tgccttttaa	agttccaaag	tgggtgttaag	aaaacataga	40140
aagcaacctt	ttccaatggc	aaaatttcga	atttttgcaca	tcaaaagtaa	ataaaaattat	40200
aggtaattaa	tttttaggtta	cgaatagtaa	atcatactta	atttttgctc	cataatgtat	40260
gcttacactc	tctaagaacc	tcaggatatg	aaataaggaa	ataagtatgc	ttgtgtacta	40320
tagagattgt	tttgaaattt	ttacttttaa	cttgtaatat	tttttacaaa	caaaataatt	40380
tatggattta	catacataaa	ctattaataa	taaaagggaat	aagtataaat	ctatcactga	40440
aaattacaga	gagaggaaaa	aaataacctg	gtgatatggt	ttggctgtgt	caccacccaa	40500
atctcatctt	gaattgtagt	tcccataatc	ccaacgtggg	gacccagtgg	gtgataaccg	40560
aatcatgggg	gcagttacct	ccatgctgct	cttgtggtag	tgggtgagtt	ctcatgagat	40620
ctgatgattt	tataaggggc	ttccccctac	tttgcctctg	acttctcctt	gctgcgggtca	40680
tgtgaagaag	gacgtgtttg	ctttcccttc	caccaagatt	gtaagattcc	tgaggcctcc	40740
ccagccttgc	agaattgtga	gtcaattaaa	cctctttcct	ttataaccca	gtcttgggta	40800
tgtctttatt	agcagcgtga	gaacagacta	atacacctgt	cagtctcctt	catgctttct	40860
gattgcacgc	tttaatgcaa	tgaccagaat	caaacagaaa	cgaccttggg	tgttttctct	40920
ggattttcct	gggcaaccag	ccagtgggac	ctggaccttc	tggtcacag	ttggaggggc	40980
tacacctgaa	ctcagctttt	catgggatgg	acagtttctt	ccaacacaag	ttccaacaac	41040
tttctgtttg	acccaaggtc	tccagatact	ggataatggg	ctttttcaaa	aaatacctat	41100
cgggccgggg	gcagtggctc	acgtctgtaa	tcccagcact	ttgggaggcc	gagggggggcg	41160
catcacgagg	tcaggagatt	aagaccatcc	tggctaacac	agtgaacccc	cgtctctact	41220
aaaaatacaa	aaaattagcc	gggcatgggtg	gcgggcgcct	gtagtcccag	ctactgggga	41280
ggctgaggga	gaagaatggc	gtgaaccggg	gaggtggagc	ttgcagtgag	ctgagatcgt	41340
gccactgcac	tccagcctgg	gcgacagagt	gagagtctgt	ctcagacaaa	caaaacaaaca	41400
aataaatgcc	tgtaaacaga	ctgcctgggtg	ctctagtagt	ttccttactg	acaaaattct	41460
ttttgtgtgt	gccctataaa	taggagagca	acaagaggat	gggattcctc	tcctattatg	41520
caaaccacaca	ccatggatcc	agcagactac	tctggcccca	gcatgctgct	ccttgggatg	41580
atggggagaag	ggggaaacct	gtgttttctc	ttggttttgt	aagtttcccc	tttccccagt	41640
aaaactcatc	ccttaatcta	gtggtttctca	aactttgggtg	tgtatcaaaa	ttatctggta	41700

ggctggataa	aacacagatt	gctgtgcccc	acttccagaa	cttctgggtc	aatagatcta	41760
gaaggagact	gggaatttgc	atattctaaca	ggccccaga	tgatggtaat	attgctgggtg	41820
gtgggtgggga	ggaccacatt	ctgagaacct	ctgtatttaa	ttttatttgt	atttatttat	41880
tttattttatt	gttttaattt	aatttttgag	tccctgttac	tcaggctaga	gtgcagtggc	41940
ataatcatag	tccactgtaa	cctgaactcc	tggcctcaag	tgacactccc	aaagtgtctga	42000
gattacaggc	gtgagacaca	atgtgcatcc	cgggccttcg	ttttaattca	tacagtgtga	42060
ctatgtggta	atcagttctg	ttggttacca	aaaaggctcc	cacttgtatg	aacttcacat	42120
aagagttaac	cactctcctt	tctagtgcct	atcttttacag	acgacccctg	acttatgatg	42180
gtttctcttt	gatttcctaa	ctttacagtg	atgcaaaagc	tatatgcatt	cagtagaaaac	42240
catgctgtga	gtaccatac	aaccattctg	tttttcattt	ttaatacagt	attcaataaaa	42300
ttacagggtta	tattagacac	tttattacac	cttattatgt	tagatgactt	tgcccaactg	42360
taggctaagt	taagtgttct	gagcatgttt	aaggtagggg	agcctaagct	atgggtgtttg	42420
gtaggttagg	tgttttacat	gtatttttga	cataggatat	tttcaactta	tgatgggtttt	42480
atcaggaggt	aaccacattg	taagtagaga	agtgtttgta	tagttttacc	acatacctag	42540
gaatccttat	ctagtggatt	cagtttccgt	tgttcaaaag	ttttataaag	gccaggcatg	42600
gtagctcatg	cctgtaatcc	cagcactttg	ggagatggaa	gtgaacggat	cacctgaggt	42660
cagaagtctg	agaccagcct	ggccaacatg	gtgaaacccc	acctctaata	aaaatacaaaa	42720
aaattagcca	ggcttggtgg	tgggtgcctg	taatcccagc	tactcaggag	gctgagacag	42780
gagaatcgct	tgaacctggg	aggcagagat	tgcagtgagc	caagatgcc	cattgcactc	42840
cagcctgggt	gacaagagtg	aaactccatc	aaaaaaagaa	aaaagaaaaa	taaaaaagta	42900
aaagtgtgat	aaaatagcat	tattttcttga	ggatattatt	tgacttgctt	ttttcactca	42960
tccatccaat	gtatagctat	cattcactca	tttttattgt	tgtataatat	tctgttttgt	43020
gtatatacct	gttgaaagac	atlttggetta	ttttcaggtt	tttttctatg	aagttgctat	43080
gaacacctat	aaatgtttcc	tagtgtatag	gaccaagact	ttttctaggg	cagtaattct	43140
cagatggggg	aaattttgct	attcccaccc	accctgaaa	cccagaagac	atlttgcaat	43200
gtctggagac	acttttatta	ttagaactca	ggagtgttac	tagaattaag	aggggtggatg	43260
ctgctaaaca	tcttaaaatg	cacagagcag	cctaaattat	acaaaatgat	ccagcctata	43320
atgtaataag	tgtggaggct	gaaaaaccct	gtgttaggac	agtgggtcac	aaagcatcag	43380
catcacctag	gaacttgcta	gaaatctcta	agatagatac	ataggagtgg	aattgctgggt	43440
tataaaaataa	gcagggtattc	acattaataa	gattatgcc	atlttgcccat	tttattgtgg	43500
ggttgtgttt	ctttttctct	atataattttg	tttatatgtt	ctctttgttt	attattgaga	43560
aagagggcaa	aaagcagccc	ctgatattca	gaagctgacc	tggcactcac	agcttgacca	43620
taatattatt	ctgttgaaaca	ttacaatttt	aaatctcata	gaataccaag	ctgagacaaa	43680
agtactctga	gatcacaata	aaatgagaca	aggccacttc	atagcattat	ctaagcatag	43740
gcaaaaaacaa	ggtctttgtg	tcacccataa	gataacagac	accccttttc	tgataaaaa	43800
gtacaacagc	tacttttttt	attattatac	tctaagttct	aaggtacatg	tgcaacaactg	43860
gcaggtttgt	tacataggtg	tacatgtgcc	tggttggttt	gctgcaccca	tcaacttgtc	43920
acttacatta	ggtattttctc	ctaacgctat	ccctccccc	gccccccac	ctctcaacag	43980
gccccagtg	gtaatgttcc	cctccctgtg	tccatgtgtt	ctcatttttc	aactcccact	44040
tacgagtga	aacacgtgg	gtttgggttt	ctgcccttgt	gctattttgc	tgagagtga	44100
ggtttccaga	ttcatccatg	tccctgcaaa	ggacgtgaac	tcctcctttt	ttatggctgc	44160
atagtattcc	atgggtgtata	tgtgccacat	tttctttatc	cagtctatta	ttgatggaca	44220
tttggtgttg	ttccaagtct	ttgctattgt	gaatagtgcc	tcagtaaaca	tacgtgtgca	44280
tgtgtcttta	tagtagcatg	atlttataatc	ttttatata	accagtaat	gggattgctg	44340
ggtcaaatgg	tattttctagt	tctagatcct	tcaggaatct	tcacactgtc	ttccataatg	44400
gttgaactaa	tttacactcc	cacaaaaagt	gtaaaaagtgt	tcctattttct	ccacatcctc	44460
tccagcatct	attgtttctt	gacgttttaa	tgatcaccat	tctgactgg	gtgagatgg	44520
atctcactgt	ggtttttgatt	tgcattttctt	tgatgaccag	tgatgacaag	catttttttca	44580
tatgtctgtt	ggatgcataa	atgtcttctt	ttgagaagtg	tctgttcata	tcctttgtctc	44640
actttttgat	gggttggttt	ttttcttgta	aatttgttta	agttctttgt	agattctgga	44700
tattagccct	ttgtcagatg	gatagattgc	aaaaattttc	tcccattctg	taggttgcc	44760
gttccactctg	atgatagttt	cttttgctgt	gcagaagctc	tttagtttaa	ttagatccca	44820
tttgctcaatt	ttggcttttg	ttgccattgc	ttttgggtgt	ttagtcatga	agtttttgcc	44880
catgctcatg	tcctaaatgg	tattgcctaa	gttttcttct	agggttttta	tgggttttagg	44940
tcttactatt	aagtctttaa	tccatcttga	gttaattttt	gtataagggtg	taaggaagg	45000
atccagtttc	agctttctac	atatggctag	acagttttcc	cagcacattt	attaaatagg	45060
gaatcatttc	cccatgtctt	gtttttatca	ggtttggtga	agatcagatg	gttgtagatg	45120
tatagtgtta	tttctgaggc	ctctgttctg	ttccattgg	ctatatatct	cttttggtac	45180
cagtgccatg	ctgttttggt	tactgtagcc	ttgtagtata	gtttgaagtc	aggtagtgtg	45240
atgcctccag	ctttgatctt	tttgttttagg	attgtcttgg	ctatgctgg	tcttttttgg	45300
ttccatatga	accttaaagt	agttttttcc	aattctgtga	agaaagtc	tggtagcttg	45360

ttggggatag	cattgaatct	ataaattacc	ttgggcagta	ggaccatttt	cgcaatattg	45420
atTTTTccta	tccatgagca	tggaaatggc	ttccatttgt	ttgtgtctct	ttttatttca	45480
ctgagcagtg	ttttgtagtt	ctccttgaag	aggctcctca	catcccttgt	aaagttggatt	45540
cctaggtatt	ttattctctt	tgtagcaatt	gtgaatggga	gttcaactcat	gattttggttc	45600
tctgtctgtt	aatgggtgat	aggaacgctt	gtgatttttg	cacattgatt	ttgtatcctg	45660
agactttgct	gaagttgctt	atcagcttaa	ggagattttg	ggctgaggct	atgcggtttt	45720
ctaaatagac	aatcatgtcg	tctgcaaaca	gagacaattt	gacttccctc	cttcctactt	45780
gaatacccta	tattgctttc	tcttgccctga	ttgccttgge	cagaacttcc	attactatat	45840
tgaattggag	tgggtgagaga	gggcacacct	gtcttgtgce	ggttttcaaa	gggaatgctt	45900
ccagtttttg	cccatcagtt	ttgatattgg	ctgttggttc	ctcataaata	gctcttatta	45960
tttttgagata	cgttccaaca	atacctagtt	tattgagagt	ttttagcatg	aaaggctatc	46020
gaattttgtc	aaaagccttt	tctgcatcta	ttcagatgat	catgtgggtt	ttgtcttttg	46080
ttctgtttat	gtgatggatt	atgtttattg	atltgctgat	attgaaccag	ccttacatcc	46140
cagggatgga	gccgacttga	tcgtgggtgga	taagctttct	gaggtgctgc	tggattcggg	46200
ttgccagtat	tttattgagg	atTTTTgcat	cgatgttcc	tagggatatt	ggcctaaaa	46260
tatctttttt	tgttgtgttt	ctgccaggct	ttggtatcag	gatgatgctg	gctcataaaa	46320
tgagttgggg	aggattccct	cttttccgat	tgattggaat	agtttcagaa	ggaatggtac	46380
cagctcctcc	ttgtacctcc	agtagaattc	ggctctgaat	ccgtctgggc	ctggactttt	46440
tttgggtggg	aggttattaa	ttattgcttc	aattgcagag	cctgttattg	gtctgttcag	46500
agattcaaat	tcttccctgg	ttagtttttg	gaggggtgat	gtgtcgagga	atlttatgcat	46560
ttcttctaga	ttttctagtt	tatttgctga	gaggtgttta	tagtattctc	tgatggtagt	46620
ttgtatttct	gtggtatcgg	tgggtatata	ccgtttatca	ttttttattg	cgtctatttg	46680
attcttttct	cttttcttct	ttattagtct	tgctacaggt	ctatcaattt	tgttgatctt	46740
ttcaaaaaac	cagctgctgg	attcactgat	ttttttgaat	ggttttttgt	gtctctatct	46800
ccttcagttc	ttttctgatc	ttagttattt	cttgccctct	gctagctttt	gaatgtgttt	46860
gctcttgctt	ctctagtctt	tttaattgtg	atgttagggg	gtcgatttta	gatctttcct	46920
gctttctttt	gtgggcatth	agtgcataaa	atltccctct	acacactgct	ttaaatgtgc	46980
cccagtagtt	ctggtacgtt	gtgtctttgt	tcttactggg	ttcaaataac	atctttattt	47040
ctgccttcat	ttcgatatth	accagtaaat	tcaagagcaa	cagctacttt	tttttaccag	47100
tcatacagta	gggaagaaaa	aatatcttct	ccttctaccc	ttctaagttc	ttgactgggg	47160
cctttgtaag	aaaagagaga	ttaacaatac	aaaaaacata	caaatttatt	caatataagt	47220
ttacataaca	tgggaacctt	cttaaggaca	tgaagaatgg	aagaaatgat	taaacctgag	47280
cattttttatg	ctaggttttg	tagagaatga	aaagtcatag	gaaaacctaa	taacacaaa	47340
gatatgagct	gcaattcctt	cagcttaaaa	taattaattt	ttaaatattt	aaattttaaa	47400
aattttaatta	aagtgtcata	atltggggta	gcatgtcctg	aactccatca	atagaattac	47460
ccttgctttc	tgaaaacact	catactatgg	gggaaccaa	cctccttctc	ctaaattcta	47520
aaactgtctt	actgagacac	cccagatgtt	gtgttctctc	ttgctcagtg	agcaatgaat	47580
tcactcttgt	caaccacaaa	tgctcctgtg	tctctggctg	aagggcata	ttcagagatc	47640
ttaatagtct	ttattatgcc	ttttgggtgag	caccacttct	tttttttttt	tcttttgaga	47700
cagagtcttg	ctcttggtgc	ctaggctgga	gtgcagtgge	atgatctcgg	ctcaatgcaa	47760
cttccgcctc	ccagggtcaa	gcgattctcc	tgccctcagc	tcctgagtag	ctgggattac	47820
aggcacacac	caccacctct	ggctaatttt	tgtattttta	atagagatgg	ggtttcacca	47880
tgttggccag	gctggtctca	aactcttaac	ctcaagtgat	ccacctgcct	cggcctccca	47940
aagtgtcggg	attacaggcg	tgagccaccc	cgcccagccc	agtgagcaac	acttcttaat	48000
tttagtttct	ttttaatttt	ttgcctccct	aatgagtgtt	ttttatgtta	tatttaagaa	48060
atcctggccc	ggcgtggtgg	cttacacctg	taatcccggc	actttggggg	gccgaggtgg	48120
gttgatcacg	aggtcaggag	atcgagacca	tcctggctaa	cacggtgaaa	ccccgtctct	48180
actaaaaatg	caaaaaaatca	gccggatgcg	gtggcgggca	cctgtagtcc	cagctactag	48240
ggaggctgag	gcaggagaat	ggcgtgaacc	caggaggcgg	agcttgagct	gagccgagat	48300
agcgccactg	cactccagcc	tgggcgaaag	agcgagactc	cgcctcaaaa	aaaaaaaaaa	48360
aaagaaagaa	agaaatcctg	ccaggcacag	tggctcacgc	ctgtaatccc	agcacttttg	48420
gaggccgagg	tgggcggatc	atgaggtcag	gagatcgaga	ccatcttgge	caatacgggtg	48480
aaaccccgct	cctactaaaa	atacaaaaa	tagctgggct	tcgtgggtga	tgcccatagt	48540
gccagctact	caggaggctg	aggcaggaga	atcgcttgaa	ccccggaggt	ggaggttgca	48600
gtgagccgag	atcgcgccac	tgcaactccag	cctgggtgaga	gagtgagact	ccgtctgaaa	48660
aaacaacaac	aaaaaaatcc	tttcttactc	caatatcata	caggtatttt	tttttttaag	48720
tttccatttt	tttttttttt	tttttttgag	actcagtttc	actcttggtg	ctcaggctgg	48780
agtgcaatgg	cacgtctctca	gctcatggca	acctctgcct	cctgggttca	agcaattctc	48840
ctgcctcagc	ctcccagagta	gctgggatta	cagacatgtg	ccaccatgcc	tggctaattt	48900
tgtattttta	gtagaaacga	gctttctcta	tgttcgtcag	gctggtcttg	aactcccaac	48960
ctcaggtgat	ccgcccacct	cggccttcca	aagtgggtgg	attacaggca	tgagccacca	49020

```

cgccccggcca acttgacaag tttttaaggt ataattcatt cagagtctaa aagtttagta 49080
ggatcatgggt agtcaggaga ataatttcac tgcagagggt tgtatgtgtt tagcaaagtg 49140
attgctaaca gatttttctg aaatccccga cagcaciaag tatcctttac attattatct 49200
ttcatgcata taaaatctca catatttctg tatagtggga gaacctggac tttaacattt 49260
tatatgaaag aaatgcataa accctgtctt tagaagataa tgtaagattt ggaaacaata 49320
tggtaaaagt aggaatagaa caaaagggggg aaaatgacaa aagaaatttt tttaaaaaag 49380
tccatgggat tcgtgggttt ctcagcttaa agggacaagg gaaagcaagt ctaggatgac 49440
tcccagttatt caaagttacc agaagcttga gatgatgaac tgctaaggta gtgagtgtgc 49500
cctatttttg ggaaaagatg gttttctctt caagtctgtt gctccttacc tttcctcaat 49560
gaatttctaa ggagcattga aatttgtgtg aaagaaaggc ttccaaaagt aaataagttt 49620
aaaatccagg gttttgtatt atactttcag atttccacaa aggccagtt tctctgtttt 49680
ttttttaaag ttaaaaaaaa gttgaaaatc aaaagcccca agtggaagt aatttgtgtg 49740
tatctaaata ttgtatacat tcaactgttt atcccagcaa ttataaaact ggggtgtgcag 49800
aaagcagcct ggagcaaaaa cattgtaatg ggagttaaga gatcaggatt ttaatgatgg 49860
tctgtacta atctatacga aaatggtttg tgtatagggt tcagattcct taaatatgta 49920
gaataagact acataatctt caagcttctc tgcagcactt aagttcagat tctacttaag 49980
cacttacgga atgtgtcagt 50000

```

<210> 7

<211> 50000

<212> DNA

<213> Homo sapiens

<220>

<223> human DYXC1 chromosomal gene region, nucleotides
50001-100000

<400> 7

```

gtaattccaa tttaccctat tccagatttg tagcaaagca tttgtcagat gaatcatagg 60
gtgggtttctc ttcagttttc aaacttttga gcaaaaccta tatagggtgct tttggcggcc 120
ttacagttaa taggatttgc aggatacaat agtttttagac aagctcctgg tatgtgttgt 180
gaacaaacgt tttctgaaga ggaatttggga gcaaagcaac tatttcaggg aacagtttgc 240
aaactggggga gttgaagcct taggtgtaaa acaaagggtgc attccagaga acaaagggag 300
ggtttgggtt ttacagcaaa agtttctgccc cagggtccca gtcaggttcg tttatacaaa 360
tgaacgattg aaccgcactt agttctgatt ggttgataca gctgagccct gattggttga 420
ggcagggtgag ccctataaga cccaacactc aacagagggtg tgggtttggg gagaacgcag 480
agtcocatgtg tgacctctag taggtaaatg accacgtgtc tctattttaa atttagaccc 540
agttagccgc tctggatgtt gacggatttg ctctttcagg ttcacatttg ttcacagtct 600
gtatgaccaa gaaatttgca aaacagaaca actagcgcta actcttaata gcctcagtca 660
gaataaacag acaagacact gcaccaaggg cgtatgggca ttgcacctgc tccatcatggg 720
ctgctttccc gagccttatg cccacagccc tccttagcat tatcgatta tgaggctgga 780
agtgtctttt ttttctttt tttctttttc ttttcttttt ttttttttga gacggagtgt 840
cgctcttggt tcccaggctg gagtgcattg gcgcgatttc ggctcactgc gacctctgcc 900
tcccgggttc aagcgattct gctgcctcag cctcagcctc cagagtagct gagattacag 960
gcatgcacca ccacgcccgg ctaattttgt attttttagta gaggcggggg tttctccatgt 1020
tgggtcaggct ggtctcgaac tcccaacctc aggtgatccg cccgcctcgg cctcccaaaag 1080
ttctgggatt acaggcgtga gctagcgcgc ccgacccaca gagtgtcttt tttttttttt 1140
ttttttctca agcagagggg atgggtctac ttctttgaac attcgctcag atcgtaagggt 1200
aaccccaaga atcgcatca ctctctgggtc tgggcgcctg gatagtcacg catggagtcc 1260
gcgagggtgct ggcgcgggag cacgctggga acgcccgggt cccggccggc ctgacccgga 1320
agggctggcg catggtaacc ccagcttccc tagcaaccaa gcaggcgcaa gaagcaacca 1380
gccgcgctat ccgctcccgt tgctaccgga atgcctcttc aggttagcga ttacagctgg 1440
cagcagacga agactgcggg ctttctgtct ctgcccctca aaggcgtgtg cgtcagagac 1500
acggcgtgt tctgcacgga aaactatctg aaggtaaagaa tgcaagtctt gcctgccggg 1560
ctccgggggt gtggctccga gcttctgcaa gagcgcagct gggcacgagc aacaggctca 1620
tctttgccga taaacgtcct aaatttttaa tcctattaaa aaaatgaatc ccatacagggt 1680
aacacacccat ctgtagacag ataatcagat cagagactac ttttatccag ggcttccctca 1740
tatgccttgc taatctttca ctacctggca taaatttagt gggcctttta gaaagttatt 1800
ttacctttt cacgtgtttc ttaatacggg tgcttaattt gtgtaactaa cttagtttct 1860
gttttcaccc ttctgcatag gtcaactttc ctccattttt atttgaggca tttcttttatg 1920

```


ctcccataga	cgatgagagc	agcaaagcaa	agattgggaa	tgacaccatt	gtcttcacct	1980
tgtataaaaa	agaagcggcc	atgtgggaga	ccctttctgt	gacgggtggt	aagttcttta	2040
ttaaaagatg	ttcatctggt	tgtacctttt	cggtttcaga	ccttttaaaa	aattttattt	2100
tgaagcacct	atattgtgta	ggggaagata	gatttttttt	ttttaagagt	cttgctctgt	2160
cgcccaggct	ggagtgcagt	gacatgatct	cggcttactg	caacctctgc	ccccgggggt	2220
caagggattc	tcctacctca	gcctctcaag	tagctgggat	tataggtgtc	cgccaccacg	2280
cccggctaaa	tttttttgta	tttttggtag	agcgttttgc	catgttggcc	aggctgggtc	2340
cacactcctg	accggtcatt	aagtgatcca	cccgccttga	cctcccaaag	tgctgggatt	2400
acgggtgcca	gccaccacac	ccggccagat	agactttcct	tttactctcc	aaggttcaat	2460
agctgggtct	ataaaataaa	ctaacaacag	aaggattgac	agaagaaaat	gtatagaaat	2520
ttatgaattt	ttaatattag	tgcttgaggg	catcacaggg	aaaaaagtga	atacccccac	2580
agcggtgaga	tttgagagtt	taggggactgt	cttaataggg	gaagggggag	gggatgtagg	2640
ccgcttagaa	caggaaatga	tttttaggaa	agatgaatgg	atccttagaa	gaatagatag	2700
gaaatgtgat	agcttttaac	aaaatttgct	agagtgtggt	gttgacttgt	agtttccttt	2760
tctgggagaa	tagtcaatat	tccttggtta	atgaaactcc	aggggaagag	atztatgaca	2820
cttgggttcc	tttggaataa	ctgtttttag	gcagataaga	ggagttctgg	caaaacctct	2880
ccctgcattt	gctgctttca	agtgccttta	actcaaaatg	atcgctatat	gaaagcagca	2940
tattttgggg	tggcatatcc	tgaactcatt	caattgctgt	tttagaaaaa	aaaaaaggct	3000
tatgagccta	atttaagtga	tacagtgtct	cagcagccat	ttaaataaac	ctaaaggctg	3060
aattagtcaa	agttagagca	cattaagcag	aagatgtggg	ctcatgtctt	aagggtaaag	3120
cctctgata	tatagccttt	attgagttct	taactttgcg	ttaggtgtta	acatgcctgt	3180
aattccatga	aacaacctgt	cacttaggta	ttattaccct	ttttttacag	gggaggctac	3240
tgacatatgg	aaagtttgag	taattggcaa	aatcacacag	ctagtgtact	gcagcctgga	3300
actggagcct	tagcagtttc	actctagagc	agatgttccc	aacctgggt	acatatttga	3360
atcagctatg	gaattttaaa	ataatactct	aatccagtga	aatcagtttc	tgggaatagg	3420
actcaggtgt	tggaaagttt	gaaaagcttt	ccaggaatta	taatgtgcag	ccaaagttga	3480
aatccccagt	tgttgtttgt	ttgtttggaa	agacagagtc	tcgctcagtc	acccaggctg	3540
gagtgcagtg	atgcgatctc	ggctcactgc	aacctccgcc	tccttaggtt	taagtgtatt	3600
tttcagctca	gcctcccaac	tagctgggac	tacaggcacg	tgccaccacg	tcagctaat	3660
ttttgtat	tttagtagag	acaaggtttc	actatatgtt	ggccaggctg	gtctcaaact	3720
cctgacctca	agtgatccac	ccacctcggc	ctcccgaagt	gccgggatta	cagccatgag	3780
ccaccgcgac	cggcctgaca	tcctccagtt	taaagctagt	tctctgtagt	cttattaagc	3840
tagttgtcag	tgctttgtac	taataccaag	atcagcttcc	atagttagta	attgtcctct	3900
actgctttag	ccctgttttc	ctccttcctt	cttttagttgt	catgttttct	aatactttat	3960
gtttactgcc	tggaaatttat	tttttttaat	tttgagtttt	ttaagagata	gaatctcacc	4020
ctatcaccaa	cgctggagtg	cggttggtgt	taccatagct	cattgttaacc	tcaaactcct	4080
aggttccagc	aattctcctg	cctcgacctc	ctgagtagca	gggactacag	gtgtgcacca	4140
aaacacactag	gtaattgttt	ttatttttgt	agagacaggg	tctcactatg	ttgccgatag	4200
gtcttgaact	cctaggctca	agtgatcctc	ccactttggc	ctcccaaagt	ctgggatttc	4260
aggcgtgagc	cactgcaccc	agactactgc	ctggaatttc	ttttaagcct	ttggcattaa	4320
gccttgaata	tggactcttg	agggtagaaa	gagttgcaac	cattctttct	atcaaggctt	4380
tcttggtatc	ttgtagtggg	atttaatttt	taatttccaa	gaccaaggta	gaatttat	4440
ttctaagatc	gggtattcag	ctcagagaat	actgggttaag	gtaggttaac	atagccagtt	4500
tacttaattt	tttttttttt	tttttttttt	tttttagtga	gccccagact	acctaaagag	4560
ttttaaagaa	tcaggttcct	gttttttgac	ctcttacttc	ctctgtgact	cagtaagtct	4620
atgttggggc	ctgaggatgt	cataacacac	ccagtctgtt	ttgacttctt	acctaaaatt	4680
gaatatacat	ttattttgac	tcttgtaaat	taactttttc	tgtaaaggac	cagatagtat	4740
tttagacttc	acaggccata	tggtctctgt	catatctatt	cagctctgcc	attgtagcac	4800
aaaagtagcc	acaggtgatt	catatttatg	gacaatgaaa	tttgaatttc	atctaatttt	4860
taaatgccac	aaaatgttat	tttgattttt	ttcatccatt	taaaaatgtg	aaaatttatc	4920
aaggcttgtg	ggctgagggg	aaacaggtgg	caggctggat	ttggcccatg	ggcatagtt	4980
tgccaacctc	tgatttagac	aaatcaaaac	agtcttaaaa	ctgacttaag	ctcagcgag	5040
tggctcatgc	ttgtaatccc	atcacttttg	gaggccgagg	cagggtgaatc	acctgaggct	5100
aggagtttga	gaccagcctg	gccaacatgg	tgaaccctg	tctctactaa	aaatacaaaa	5160
cttcgtcagg	cgtggtagtg	gatgcctgta	gtcccagcta	cttgggaggc	tgatgcagg	5220
gaatcgcttg	aacccgggtg	gtggaggttg	cgcgagctg	agatctcacc	actgcactcc	5280
agcctgcgca	acagagcgag	actccacttc	aaaaaaaaata	aaaaataaaa	aaccactaat	5340
ttatatcaca	atgaacattg	attctacttc	agaaaccagg	tttgagattc	ctttagaaat	5400
caaactcagt	ttgccggggc	cgctggctca	cgctgtaat	cccagcactt	tggtaggccg	5460
aggcgggctg	atcatctgag	gttgggagtc	cgagaccagc	ctaaccaaca	tggagaaacc	5520
ccgtctctac	taaaaataca	aaattagccg	ggcatggtgg	cgcatacctg	caatcccagc	5580

tactcaggag	gctgaggcag	gagaatcact	ttaacccggg	aggcggaggt	tgcggtgagc	5640
cgagattgtg	ccattgcact	tcagcctggg	caacaagagc	gaaactcagt	ctcaaaaaaa	5700
aaaaaaaaaca	agaaagaaat	caaactcagt	tttgccaggt	tacagtggct	catgcctaaa	5760
gtaatctcag	cacttttagga	ggccaaggtg	ggaggatcat	ttgagcccag	gaattcaaga	5820
ccagcctggg	caacataggg	agacttcacc	tctattaaaa	aaaaaaaaatt	agccgggcat	5880
agtggcatgt	gccttatagt	cccagctact	tgggaggctg	aggttggagg	atcacttgag	5940
cccaagaggt	ggaggctgca	gtaagccatg	ctcataatgc	tgcactccaa	cctgggtgac	6000
agtatgtgat	cctctctcaa	aaaaaagaaa	tcaaactcaa	ttttacttgc	aattcagtgg	6060
gattatttat	ttaaccattt	ttttttcaca	taaaatattg	tggaaactcca	gtttatacac	6120
gtagactgtc	tacctcatta	ttcagactct	aattttttctc	attttttctg	gaaattcctt	6180
cttgatacac	tctttatttc	tattagacat	ggagtatttc	atttgggaag	ttaatgttct	6240
tccagttatt	tctgccgctg	aagctgactt	agctgtctac	cttcctgttt	ttaaacagca	6300
ggagagatga	gaagaggctt	cagacctaac	ttcagtacta	gttcttagcc	aagatcttag	6360
atgaataaaa	ttacacactt	ttacttacct	ctaactgata	tttaacattc	tcttcaattg	6420
tgaagatagg	caacaaataa	tagtagtata	ttagtctggt	tgggtactat	aacaaaatac	6480
catcaactga	gaagcttata	aacaacagaa	ctttatttct	cacactcctg	taggctggga	6540
agtccagatc	aaggctcctg	caggtttggt	atgcggtgag	ggctcacttt	cctgtagatg	6600
gcaccgtact	gtgtcctcac	atggtggaag	gggcaagtct	gctttctggg	gccttctgta	6660
taaggacact	acctcccaaa	aggcctcacc	tacaaataat	atcacattaa	gggttgggat	6720
tttaacataa	gagtttttag	gagacataaa	cattcagacc	atagcaagta	gtatcaacaa	6780
aaacaaaagt	atgtttatat	cagagatacc	tcttttatata	tctactttga	aattacaata	6840
ttagacttgt	tgtatataat	taatgcatta	ataaagaagc	acataatcgt	gtatcacaat	6900
ttggccggcc	gcagtggctc	acgctgttaa	tcccagcact	ttcggaggcc	aaggcaggcg	6960
gatcacaagg	tcaggagatc	aagaccatcc	tggccaacat	ggtgaaacc	cgtctgtact	7020
aaaaatataa	aaattaggtg	ggcgtgggtg	tgcccaccg	tagtcccggc	tacttgggag	7080
gctgaggcag	gagaattgct	tgaacccagg	aggcgggggt	tgcagtgagc	tgagatcgga	7140
ccacagcact	ccagcctggc	aacagagcaa	gactccggct	caaaaaaaaa	aagtatatca	7200
caatttttatt	tcttaatggt	ttataagtgt	tttgatataa	ctgagtttct	ttgtagacct	7260
gtatatttta	tttcatacat	tttaaaacat	tgtgaaagga	tttataagga	ttcactactc	7320
tggcaagggtg	tctgctgcac	aaaaaagggt	aagaacccat	gcctggggta	tgattcatcc	7380
ctctaccac	cccttatcta	ctctccccta	ctttgtcttc	ccctcaagtt	ttctcctctc	7440
cccttctgtt	tttttttttc	tgtttaaagg	ctagatcttt	tcccttaggc	tctgatcctt	7500
ccctttgtaa	gataatttac	ccattgatcg	tagtcttcag	tttgtgaaac	tttggggcac	7560
atcaaatata	aagataactg	tgagatcttg	cgtgggtggt	catgcctgta	attccagcac	7620
tttgggaggc	caaggtagga	gcategcttg	agcccaggag	ttcaagacca	gcctgggcaa	7680
tatagtgaga	cctcgtctct	acataaaaatt	taaaaaattag	ccagatgtgt	tggcacacac	7740
ctgtagtccc	agctactcag	gaagctgagg	taggaggatt	gcttgagccc	aggaggttaa	7800
ggttacatta	agctgtgatt	gcttaactgc	actccagcag	cctgggtgac	agagagagac	7860
ctagtctcag	gaaaacaaac	aaacaagctg	tggatggtaa	ggttttatat	atatttatat	7920
atattatata	aaatattata	tataaatata	tataaaacct	tacctattat	attattatat	7980
actattataa	tataatatta	tatattatat	tataactat	tatataataa	tagtatataa	8040
tattattata	taataatata	atattatcta	taatatataa	tatatatttt	atattttata	8100
tattatataa	atgatgattt	attgtgatca	ggttttataag	caaataagccc	tagtttctta	8160
acagagaagg	aagaggataa	atgtgtcctt	gcaccttcat	cctcaccctc	tccctctcat	8220
tacctgcctc	ttgtgtccct	ccccatccc	ttctcttctc	tctccacccc	cttcattctc	8280
tagtcattca	ttattattac	agttagttgc	ttacctttta	acattagctt	cttggccagt	8340
ttaatatattg	aaaatatttt	ccatgttcc	tgtgaagttg	ggtacaaaga	aatctcatcc	8400
tgggtcagtt	tatttaagta	gttttctcat	aagtaaagca	aatttgtcat	aattcttaatt	8460
tagcaatatt	ctgtacattt	tagttgacaa	agagatgatg	caaagaatta	gagaaaaatc	8520
tattttacaa	gcacaagaga	gagcaaaaga	agctacagaa	gcaaaagctg	cagcaaagcg	8580
ggaagatcaa	aaatacgcac	taagtgtcat	gatgaaggta	agttgcagaa	tgacaggcaa	8640
gtcctctaaa	gagataatag	tagactatgt	gaggatagtg	agttccagct	gctggacttc	8700
ctcagcattt	tcttcatact	ttgttttagag	gaacttactat	gttatataga	ctgtctgcta	8760
tttatatgtg	tgtttttttt	tttcttgaga	ccgagtctca	ctctgtcgcc	caggctggag	8820
tgcagtgcgt	tgatctgggc	tcaactgcaag	ctccacttcc	cgggttcatg	ccattctcct	8880
gcctcagcct	cctgagtgc	tgggactaca	ggcactgcc	accatgccag	gctaattttt	8940
ttgtgttttt	agtagagaca	gggtttcacc	gtgttagccg	ggatgggtctc	gatctcctga	9000
cctcgtgatc	tgcctgtctc	ggcctcccaa	agtgtggga	ttagaggcgt	gagccaccgt	9060
gccccggcca	tgtttgttct	tgaaatctga	atgaaagtca	aagggtgtaa	agttggacag	9120
ttgtttcagg	gagagggttc	tatttctagg	ggagtaaaaa	taaagtttca	atgggtgcaag	9180
tgttttactt	ctttttaaat	cttggaataa	cagatatgat	tttaaaacag	aagcatattt	9240

aaaacattat	tgtcaaattt	ttttaactgt	taagggtttt	aagtgaaagt	tttaatcagc	9300
aatatatttt	ttgagaaaca	attcacattc	catataattt	acccatttaa	agtgtacaat	9360
ttaatagttt	ttagtagatt	cagagttgtg	taaccattac	tacagtcaat	tttagaacat	9420
tttcatcacc	ccccaaaaag	caccaatacc	cctaagcagc	cactcccat	ttcccctaac	9480
acttagtcct	aggcaactgc	ttatctattt	tctgtctcaa	tagatatacc	tattttgagt	9540
aattttttaca	aaaaaattct	tatctcaggg	caagcgcagt	ggctcatgcc	tgtaatccca	9600
gcactttttg	gaggccgagg	cgggcggatc	atgaggtcag	tagttcaaca	ccagcctggc	9660
caacacagtg	aaaccctgtc	tctactaaaa	atacaaaaa	cagccgcgcg	tggtggtggg	9720
cacctgtaat	cccagctact	cggtaggctg	aggcaggaaa	atcgcttgaa	cccaggaggt	9780
ggagggttga	gtgagcggag	attgcgccac	tgcactccag	cctgggcgac	agagtggagc	9840
gccgtctcaa	aaaaaaaaaa	aaaactttct	atctcgaatt	cccatthttga	catgttgagc	9900
tgactaagga	atctataata	cgcattatth	aagatttttg	tggaacctag	actgtttttt	9960
ggatttttcat	aactagcatt	gtttttctatt	atcaacagtt	tatgattcca	aagattttgtc	10020
cacttttttt	atcacttcca	cttaactttt	tttttttttt	tttttgaaat	ggtgtctggc	10080
tctgttgccc	aggctggagt	gcagtggtga	gatctcagct	cactgcaacc	tctgccactc	10140
gggttcaaga	gattctcatg	cctcagttct	ctgagtagct	gggactacag	atgtgcacca	10200
ccacgcctgg	ctaatttttt	atattttttg	tagagacagg	gcttcaccat	attggccagg	10260
ttggtgtcga	gctcctgacc	tcaagtgatt	cacccgcctt	ggcctcccaa	agtgttgagg	10320
ttacaggcat	gagtcaccgc	actgagccat	atactttgtc	ttttacttaa	taattgaaat	10380
ggtcagctgg	tcaaagattc	ctgcctttag	catacttaat	tccatctttt	ctttattgta	10440
tgatcacagc	tggtggcctt	ttgattttat	cattttcatg	aatttaaaaa	aattaatata	10500
gaatttgtgg	caatagatat	tactgaaat	aataaaacag	ttaaataatg	gcacacttac	10560
tgctgtattg	gtatgtcaaa	acagaacagt	tgaccagcag	gaagcaccac	tatgttgtac	10620
cttgaagggt	tggtttttgt	tttttttttt	tgagatggag	tcttgcttag	tcgcccaggc	10680
tggagtgcag	cggcgcaatc	tcagctcact	gcaagctctg	cactcctggg	tcacaccatt	10740
cttctgcctc	agcctcccga	ataggtggga	ctacaggtgc	ctgccactac	gcctggctaa	10800
tttttttgta	tttttagtag	agacagggtt	tcactgtgtt	agccaggatg	gtctcgctct	10860
cctaacctcg	tgatctgccc	gtcttggttt	cccgaagtgc	tggtgattaca	ggtgtgagct	10920
gocgcaccca	gctgaagttt	tcaattttact	aatgtatgaa	agcttgactt	tggtattggg	10980
aaagggtgatt	tagaggaatt	aatatataaa	atatgaagat	acgggttata	ttaagaggac	11040
agaacctaca	aaagccagta	tctgtttcca	caaattgtct	gttttctctc	ttccctcagt	11100
agtgttgaga	gttgggagta	tggtttgttt	catccttatt	atagccatta	tcaagtaaat	11160
tggtgtccta	acatttgaat	aaattaatat	gaatgcatta	ctctagtact	atgtaccctg	11220
agcaaacgtc	tactttgggtg	aattagctga	agctattttc	actctgtgca	atcctagaca	11280
ctgttaagaa	aagaactttg	acgatccagt	aagagcaaat	agtaacaaaa	ggcaacatat	11340
tgttagctta	agtttagcata	aattaatttt	aaacttgaag	gacatctacc	aaaaataagt	11400
ggttttttaag	tagtaacctt	ttaaaaaata	attagtgggg	ctgtgtcaat	tcgctatact	11460
gtgtgtacag	gtattattct	gcttgggcta	ccctaacaaa	atgttgttta	acagaaattt	11520
atthttctcat	agatcaaggt	ctggtagggt	ctctttctgg	ttagactctc	tgthtttggtg	11580
gccttcttgc	tgctgtctta	cgcagcaaaa	aaaaaaaag	aaaaagaaaa	agattgggtat	11640
ttcatcctga	gagtatgggtc	aaggaatcca	aagcagttat	gtttgtgctg	aatcctggaa	11700
aatgaatcac	aattaggttc	ctggtagaaa	gagagggaaa	acctcattgc	agaagtgtct	11760
ttaaagcccc	tgctgtgtca	tatttgctaa	tgtaccatta	gccaaatcaa	gtcacatagc	11820
caagtccaga	tttaaagatt	ggaaaaatag	actatacttc	ttggaaaagag	aggtataatg	11880
ggaaaaatgac	attacaattt	ggataggtat	atgaaaaata	ggcacacaaa	ggaacattta	11940
ttgggtcagaa	ataatatcct	aatgtgtcca	gaattttatt	cctctgggtg	gttcttggtc	12000
tcactgactt	caagaatgaa	gccgcatacc	tcattgtgtg	ttacagctct	taatgggtgg	12060
gcgtccggag	ttgtttgttc	ctctcggtag	gttcgtggtc	ttgctgagtt	caggaattaa	12120
gctgcagacc	ctcacggtga	ctgttacagc	tcttaaagg	ggcgcggacc	cgaagagtga	12180
gcagcagcaa	gattttattat	gaagagtga	agaacaaagc	ttccacagca	tggaagggga	12240
cccgagccag	ttgccgctgc	tggtctgggt	ggccagcttt	tattccctta	tttgtccccg	12300
tctatgtcct	gcggattgggt	ccatttttaca	gagtgctgat	tggtccattt	tacagagtgc	12360
tgattgggtg	gtttacaatt	gttaagctaa	acacagagca	ctgattgggtg	cattttttcca	12420
gaatgctgat	tggcgcgttt	acaatccttt	acgtagacac	agagcactga	ttggtgcatt	12480
tttgagcag	gctgattgggt	atgtttacaa	tccttttagct	agacacagag	cgctgattgg	12540
tgcatthttta	cagagtgtctg	attgggtgcgt	ttacaatcct	ttagctagac	aggaaaagtt	12600
ctccaagtcc	ccacttgacc	caggaagtcc	agctggcttc	acctctcact	aagattttga	12660
aaaattttctc	aaagggtata	gagaactctc	ttaaagggtt	ttccacaaaa	gtgtaaaatt	12720
agttgagttt	gtctttttaga	aagctcgttc	tggttaaatga	gtttgaagag	gttgcagggg	12780
ggaggcagag	tttttggttaa	gatggagaaa	ttttgagcat	acgtatgttg	aggaaggaag	12840
ccagtaaaaga	gggaaagggt	aataatacaa	tgaagagaga	agattgatga	tggagcagtt	12900

ttctggtgat	atggggatat	tttatcattt	ttgctaatta	aaaataaact	tttttttttt	12960
tttgagacag	ggtctgttgc	ccaggctgga	atgcaaaatg	gcgcaattac	agctcactac	13020
attgacctcg	caggttcgag	agatcctccc	acctcagctt	cccaagtagc	taggactata	13080
ggtgtatgcc	accatgccct	gctaattttt	ttgtagtttt	tgtagagatg	gggtctaact	13140
atggtgcccc	gcaggaacaa	agaatagata	tctaaggatc	tggaaaattc	ttaagcacac	13200
agataattaa	aggaattttt	actttgcttg	gtaaagaagc	agggtcatct	gggcatgggtg	13260
gctcatgcct	gtaatcccag	cactttggaa	ggccgaggga	ggtggatcac	ctgaagtcag	13320
gagttcaaga	tcagcctggt	caatatggtg	aaaacctgtc	tctactaaaa	atacaaaaat	13380
tagctgggcg	tgggtggcagg	cacctgtaat	cttagctact	ctggagggtg	aggcaggaga	13440
atggctggaa	cccaggaagc	ggaggttgca	gtgagctgag	atcatgccat	tgcactccccg	13500
cctgggtaac	aaagagtga	acttcatctc	caaaaaaaaa	aaaaaccaac	caaccaacca	13560
accaaacaaa	cagaaaaacg	aggcagggtc	atcaacagaa	aggagagat	tgagggtggag	13620
gtatagggat	atgaggtgat	tagtggaaagc	ttggaatact	gatgccagag	tcttccaaaa	13680
tgtgcttttt	tttctctctc	gctaactctg	gctgctactg	cctccttttt	tttttttttt	13740
tttttgagat	ggagtctcgc	tctgtttgtc	aggctggagt	gcagtggcgc	agtcttggct	13800
cactgcaagc	tctgcctcct	gggttcatgc	cattctcctg	cctaagtttc	ccgagtagct	13860
gcgactacag	gtgcccgcga	ccacgcccac	ctaatttttt	gtattttttg	gtagagatgg	13920
ggtttcaccg	tgtagccag	gatggtctcg	atctcctgac	ctcgtgattt	gcctgcctca	13980
gcctcccaaa	gtgctgggat	tacaggcgtg	agccactgcg	cttggccgcc	tacttttctc	14040
gtcttcttca	ctattttgtt	ctgtacatta	cccacttcta	tcttgaattt	tttttttatc	14100
atttcttgtt	tttgttttgt	tttccgcttc	aatggaactc	ttttttccaa	ctgatctttt	14160
aaactggata	ggtcaaattt	gaagtgcatt	tttctgctgt	ggtttcttaa	agttgaaacc	14220
cagaaacctt	aatctttgaa	agaggtttgc	ctgatcatgc	agataaggta	tgagttgcta	14280
gttgtctatt	taatgccata	ggacctcaaa	atgatcctta	tcagtgaata	cacatgccct	14340
gtttatcatg	ggcatgtata	actaatgtac	aaaaagacca	caatgaactg	ctttgccatt	14400
ttattctatt	ttatgataat	aactttcatg	attctggcat	ttaaaaaatc	ctcccatctt	14460
tcttttttct	ttcatctcat	tctctctcag	tgtatgtcag	actttctcag	cagcctgtct	14520
tccactttta	catgttttgt	attttctcca	taaaccgctt	cttagagctc	tgtacttttg	14580
gtatctcctg	ttctgatgtc	tttggccagt	gtttattcat	ttatgtgtta	ttggacactt	14640
gggttgcttc	cacccttttg	ctagtgtgaa	taatgctgct	gtgaacatga	tgtgatgggt	14700
aatactgact	gtcaactgat	tggattgaag	gatgcaaagt	attgatcctg	ggtgtgtctg	14760
cgagggtgtt	gccaaaggaa	attaacattt	gagtcagtgg	gctgggaaag	gcagaccac	14820
ccttaatctg	ggtggtcacc	attgaattgg	ctgccagcat	ggctagtata	taaagcaggc	14880
agaaaaatat	gaaaagacga	gactggccta	gcctcccagc	ccacatcttt	tgcctcgtgt	14940
gggtgtttcc	tgccctcgaa	catgggactt	caagttcttc	agttttggaa	cttggactgg	15000
ttctccttgc	ttcacagctt	gcagcaggcc	tattgtgata	ccttgtgatt	gtgtgagttt	15060
atacttaata	aactcccctt	tatatatac	tatctatact	attagttatg	tctctctaaa	15120
gaacctgac	taatatacac	gagtataaaa	atatcccttt	gaaatcttgc	tttcaattgt	15180
tttgggcttg	tatctagaag	tggatatagc	agatcatatg	gtaatggtaa	ttctgttttt	15240
tttttttttt	ttcctgagac	ggagtctcac	tctgttgccc	aggctggagt	gcagtgggtg	15300
gatctcggtc	cactgcaagc	tccgcctccc	aggttcaagc	cattctcctg	cctcagcctc	15360
cccagtagct	gggactacag	gtgctcacca	ccacgcctgg	ctaatttttt	ttgtattttt	15420
agtagagaca	gggtttcacc	atgttagcca	ggatgatctc	gatctcctga	cctcgtgatt	15480
cacctgtctc	agcctcccaa	agtgtcggga	ttacaggcat	gagccaccgc	gcccggccta	15540
tttttaattt	tttgaggaat	tgccatactg	tattccatgg	catttggacc	attttatggt	15600
ttcatcacag	tgtgcaagga	ttccggtttc	tcccattctc	actaacactt	gttatttttg	15660
ttttttgaga	gtagccatcc	taatgggtgt	gaagtgggtat	ctcattgttg	ttttgatgtg	15720
ctcttcagtg	ccattttta	ttgaactata	tctctgaaac	ccactcattc	ccttttttcc	15780
taaatctttg	agatattggt	aagtataaca	tttattcttg	cttgcctctt	tcctctcttc	15840
tcccattatt	tggcctatgc	tttctcttaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	15900
aaaaaagctt	tattggctgg	gtgtgatggc	tcatgcctgt	aatcccagca	ctttgggagg	15960
ctgagcaggt	ggactgcttg	aggtcaggaa	tccgagacca	gcctggccca	tctctactaa	16020
aaatacaaaa	aattagccgt	gtgtgggtgt	gtgcacttgt	aatcccagct	actccggagg	16080
ctgaggcagg	agaatcactt	gaacccagaa	gacagaggtt	gcagtgggcc	aagattgtgc	16140
cactgtattc	cagcctgggc	gacagagtga	gactccattt	caaaaacaaa	aacaaacccc	16200
agctttattg	agatataatt	tatataccat	aaagttcatt	cttttaaagt	gtagaattca	16260
ttgtttctta	gtatgtatac	aagttattca	gccatcacca	ctatgtaatt	ctggaacatt	16320
tcataaccat	aaaaagagac	ctattggcca	ggcatgggtg	ctcacacctg	taatcccagc	16380
actttggggag	gctgaggggg	gcggatcaca	aggtcaagag	tttgagacca	gcctggccaa	16440
tatggtgaat	tcccatacct	attaaaaata	caaaaattag	ccaggtgtgg	tgggtgtgcat	16500
ctgtagtccc	agctactcgg	aaggctgagg	caggagaatt	gcttgaacct	gggaggcaga	16560

ggttgcattg	agccgagatt	gagccactgc	actacagcct	aagcgacaga	gcaaaactct	16620
gtctcaaaat	aaataaataa	ataaataaat	aaagagccct	attttcatta	gcagtcactc	16680
cctacttttc	cctccaccat	agccoctgga	ggagacagaa	tctactgtct	gtttctatag	16740
atttgtttac	tctagacatt	tcacatacag	tgtgtgggtc	ttggatgtga	tgcccatcag	16800
tctttatggg	aggctttctt	tcacttagca	aaatgtatat	agggcttata	catattgtag	16860
catgtataag	tttttcattc	ctttttatgg	atgaataata	tggcatagta	tggatggcac	16920
cacattttgt	ttatccattc	atcagttggt	gaaaatttag	gttctcttca	ccttttggct	16980
attacaaata	gtactactat	gaccattcat	gtacttctag	tatttaagta	tctgtttttt	17040
gttttgTTTT	gttttgTTTT	tgagatggaa	tcttgcctcg	ttgcccaggc	tggagtgcga	17100
tggcatgac	tcagctcact	gcaacctctc	cttctggttg	tcaagtgatt	ctcctgcctc	17160
agcctcctga	gtagctggga	ttacaggcaa	gcaccaccat	gccagctcg	ttttttgtat	17220
tttttggtag	agaggggggt	ttgccatggt	agccaggctg	gtctctaact	cttgacctca	17280
ggtgatccac	ccacctcggc	ctcccaaagt	gctgagattg	catgcatgag	ccaccacgcc	17340
tggccttgag	tgtctgtttt	taattctttc	atgtatatac	ttaggaatag	aattgctggg	17400
tcatttgtaa	ttctgttttag	ctttttgggg	aatcatcaaa	tagttttcca	caatggctat	17460
actatttttc	attcccacca	acaatgtatg	atgattctaa	tttttttaca	tctttgccaa	17520
cacttctgtt	gttgccagat	ggaaagtctt	gactatgagt	tgtcccagtt	cttggcacat	17580
taaacaaaga	attgaacaaa	atgcacaaac	aaagcaataa	aagaacaaaa	caacgaaagt	17640
gcaggtttac	tgaagcaaaa	gtacactcca	cagagtgtaa	gcgggctcaa	gcaagcagct	17700
caagagcccc	gattggcaatg	ttctttcagg	tttgtactaa	actaaaagaa	tttggtagca	17760
ttcctgggta	ccgttttagag	gcttcccatt	ggttgcaccc	tacacaaatg	aaggcttggc	17820
ccattactaa	tcagaggctg	aagtgaagtc	ttggcccata	actaattagc	aataggggag	17880
agaggggggt	ttgtagaggg	aggggcctct	ggcccttggc	atggagaggt	ggggtttttc	17940
ttttggccca	attccaataa	gccagctgct	agttggcctc	aggtccctg	ttccagaccc	18000
tgttctgcct	catttccccc	tgagagactt	gatcccaata	aatctttatg	ggaggcagag	18060
gaactgatgg	tctgtcttct	gtaattgctt	cgtgcggatt	agggcagagt	ccctacatat	18120
tggggaccac	agaactcttg	ccctgctctg	tctagtggag	agaggggtgac	ttcttgaagg	18180
ctagggtctg	catcgctacc	tggaactggc	tagaagccct	gctgcatgat	catttgaagc	18240
ttaatgttct	ctaggtgaga	agaaataaat	ctggttacat	gattaaacaa	aaatgggtcca	18300
aaaatcaatg	taagtacaag	tattaataat	gtgctggcta	ggggaaggag	ccatgaaacc	18360
cagcttagta	tccttgacca	ggggccccc	gacttggaca	actgttgtca	tatttttagag	18420
gcctggtcag	ctaatttttg	ggcagcatcc	cttactaatc	ctgattgggt	gatatgaaaa	18480
cagtgtcttc	cctctaggaa	aagatataag	ccactttttt	cagcagttag	gagatccagt	18540
ccctgtatta	gtccattctc	acactgctaa	tgaagacata	ccaagatcg	ggtaattttat	18600
aaaggaaaga	gttttcattg	agtcacagtt	ccacatggct	aaggaggcct	caggaaacta	18660
ccaatcatgg	cagaagacac	ctcttaacag	ggtggcagga	gagagaatga	gcaccagcag	18720
gagaaatgcc	ataaaacctt	ataaaacctt	tagatcttgt	gagactcact	cattatcatg	18780
agaacatcat	gggggaaact	gcccccatga	ttcatttacc	tccacctggg	cccaccttg	18840
acacgtgggg	attattacaa	tccaagggtga	gatttgggtg	gggatacaga	gccccacctt	18900
atcagtcctc	ttctgttttg	taaagtgact	gccaaagagt	ctacctgatt	ttgtaaggca	18960
tactttgggc	agtgtcttcc	aagccgtctg	aaagctcctt	ggacaagcgt	tggtaatagg	19020
atagagaagt	tggaaagcca	ctatttccctg	tttctacgcc	tgcagttatt	cgtaacccta	19080
cctgaaaggg	tatgagttgg	gtggcttggt	tgtgcctgat	ggttgcagtt	aaagggtataa	19140
tgagagactg	gttattggga	gctatatgtg	tctcgggggc	taagtaaaca	agtgtgcagt	19200
gcaaaacaatt	ggttccagtc	catttggcta	gtaaacgtaa	gtaggaaacta	gtcccacaca	19260
ggaaaaaggg	tgcttgtttt	tcaagacaaa	aattgttctc	tatgatgaac	atgtagggtta	19320
gcttgttgtt	ttccttttcc	caagtgggtta	aggtccctgc	tacagtggcc	ctgggttaaag	19380
gctggagggg	gccttgggta	tcgggggatc	ccacccccag	tatttcaacg	taggttcttt	19440
ctgttttcca	taagtgttgg	ccagctgaga	aataaagaga	gacagtataa	agagaggaat	19500
tttacagctg	ggccatcggg	ggtgacatca	catatcggtg	ggactgtgat	gcctgcttga	19560
gcctcaaacc	agcaagtttt	tattaagggg	ttcaaaaagg	gggtgtaaga	acagggagta	19620
gatacaaaga	tcatatgctt	caaagggcaa	caagcagaac	tactaataag	ggtgtaacaa	19680
agatcacata	cttctgaggg	aacaggacaa	agggcaaaag	cagaactact	gacaaggggtc	19740
caacaaagat	cacaaggcaa	agggcaaaag	cagaactact	gataaggggtc	tatgttcagc	19800
agtgcacata	ttatcttgat	aaacatctta	aacaacagaa	cacaggattc	aagagtagag	19860
aactgggtctg	accacaaatt	tacgaggggtg	gagtttttcc	cccaccctag	taagcctgag	19920
ggttctgcag	gagaccaggg	cgtatctcag	tccttatctc	aactgcacaa	gacagacatt	19980
cccagagccc	agagcggcca	tttatagacc	tccgcctagg	aacacattcc	tttcccaggg	20040
tattaatatt	aatattcctt	gctaggaaaa	gaatttagcg	atatgtctcc	tacttgcag	20100
tccatttata	ggctctctgc	aagaagaaaa	atgtgactct	ttttgcctga	ccccacagac	20160
agtcagacct	tatgggtgtc	ttcccttggt	ccttaaaaaat	tgtattatt	ccgttctttt	20220

tcaaggtgca	ctgatttcat	attgttgaaa	cacacatggt	ttacaatcag	tttgtacagt	20280
taacacaatt	atcacagtgg	tcttgaggtg	acatacatcc	tcagcttacg	aagataacag	20340
gattaagaga	ttaaagtaaa	gacaggcata	aattataaaa	gtattatttg	ggaactgata	20400
aatgtccata	ttaaaatgaa	atctcccaat	ttatgttcct	ctgctgcggc	tccagccagt	20460
ccctccattc	gggggtccctg	acttccccga	acacttgagg	agtactctga	gttgcccaag	20520
tggttttgtt	ctctcagttt	aggtgggtat	gcttagtgct	taccagccaa	cacccagagc	20580
tatttttgtg	ctgggggact	aaaaggcaac	tagatgtctc	aggattagta	tagccttccc	20640
aggggaaaat	gtgcatacag	ctagtggggc	taccctgaca	gtacttagac	tgcatacctt	20700
ttaaagtagc	cttaactaag	gggtggtttc	atgaaaacca	tacaagtgtt	ctaaatgatg	20760
cagtcctggg	aactgcatag	cttaccatgat	cagataagag	gttaatctct	aggggggtgg	20820
tgcattgaa	atatttcaag	gtactcaggg	cttgacccaa	atgttggtct	cttttaatac	20880
aaagtgggtg	ctggaatttt	agttctgtgt	gcacgcata	tgggccccta	atgggttttt	20940
gaggggatgc	aactccagaa	aggttgattt	gataggactg	gagaagggtt	actgcttgct	21000
ttgtcattgt	aacctttgtc	atctccgtaa	ttttgaaagc	aaatatgtca	tgcagggttca	21060
ttaaattgaa	gggagttctt	ctcttatagt	tggagatttg	gggtggggata	ttttctcaag	21120
ggcccaagat	tgggctggga	ttgggatagc	agtgtgtttg	acttcagctt	aattggatgt	21180
tggttttggg	tgggataatg	actgggtcct	ttagctgta	tgttgactgg	cactgccatt	21240
ctagcccttc	caggcctccc	agtataccat	gctagcagg	tgacctgttt	gttgacatgg	21300
tccagaacgt	tgtctgcac	actgaccatt	agcaccagg	cagtgtctaa	attgtagcag	21360
tgcccttatt	ttaaccataa	aatctcttct	gaacaagggg	actgggcagc	ttggtactat	21420
tagaaaaccc	tgctggaaaa	tttgtttttc	aaattggcag	gttaaaggag	gggtgaaatg	21480
cctgacttta	tttttctctt	catttctctt	aacagtcatt	gtcctagtgg	agggctttcc	21540
tgcataagca	gtaagtacag	agtaacttgc	ccctgaatca	aaaagaaact	gaatttgtgt	21600
accggttgtg	tccagagtta	ctcagggatc	ctcagtagta	atgatgatgt	tcctggacag	21660
gggcagtgag	gaaggccctg	ggcccccttc	gtcttcatct	agctcctgct	tttgactgct	21720
tagagtctta	actgactgag	ctcctccgtg	ggagctgggg	cagtcagtc	tccagtgtct	21780
gggttacagg	cacctgccat	gatgcccagg	taattttttt	atgttttttt	tttttcagta	21840
gagacagggt	ttcaccatgt	tggccagatg	gatctcaaat	tcctgacctt	aaatgatcca	21900
cctgcctcag	cctcctgaag	tgtctgggatt	tataggtgtg	agctgccaca	cccagctagg	21960
agtgacagct	tctaagctct	ttacatgtca	aagcctaaac	tgatgttctt	atgttaattt	22020
tttacctata	tagataaaaa	acatgcacat	atatgtgtat	atatgtatat	atataatac	22080
acacacacac	gcatacatat	atacatactt	acatatattt	ttaaatatatt	ttaaaattta	22140
tttttcagtg	gttggttctgt	gttcccttta	ctgatcacia	tctacttcag	gttaatactg	22200
actcagttcc	agtaaaaat	agcaacttgt	tctaataata	ctccattttc	tactcctccc	22260
tttgggtctat	tagtgccatt	cagggtatgtg	tatatgcata	tatatattgt	gtaatcccaa	22320
caatatgtgt	tagtatttta	cattaaaaat	cattatttct	taaaaaatct	taggttttta	22380
aataaataaa	gagtagaaag	caaaaatata	tatatgtctt	ttttaaaaag	tttattttct	22440
aattgtggta	aaatataact	aacatacaac	ttaccatctt	taagtataca	gttccatggc	22500
attaagtata	ttgacaacca	tcactactaa	ccatctccag	aactcttttc	tttttttatt	22560
ttttttttga	gttgaggattt	cattctgttg	cccaggctgg	agtacagtgg	cgtgatctca	22620
gctcactgca	acctctgcct	cctgggttca	agtgattctc	ctgcctcagc	ctcctgagta	22680
gctgggatta	caggcgtatg	ccaccacgcc	cggctaattt	tttgtatttt	tagtagagac	22740
gggggtttcac	catgttggcc	aggtctgtct	ttactcctg	acctcaggtg	atccacccgc	22800
cttggcctcc	caaagttcgg	ggattacagg	cgtgagccac	catgcctggc	cctccagaac	22860
tcatttctgt	ttgcacaatt	aaaactctgt	accatttaaa	caataactct	ctattctcta	22920
tcctcccagc	ccttgacagc	caccattcta	ctttttctat	gaatttgact	attttatgta	22980
aaaaaaaaatg	acttatttta	cttcatgtaa	gtggaattat	acaatatattg	tccttttgtg	23040
actgttttat	attttttagc	atactttgtc	ttcaagggtc	atccttggtt	tagcttgtgt	23100
cagaatttcc	tttcttttta	aggtctgaat	atgttctatt	aaaacgtata	gaacacattt	23160
aaaaaaaaatct	gtttgtattg	tcctttacgc	ttaccacat	atttaccatt	tctcatactc	23220
ttcattcttt	ctttagagta	tgaattagtt	aatatctggt	atcattttcc	tttcccttct	23280
cttttaagag	ataaggtctc	actctatttg	acaggttgga	gtgcagtggg	acattcatag	23340
ctcactgtaa	cttcaaactc	ctgggtctca	gcagctttcc	tgccccagcc	tcctgagtag	23400
ctgggactac	acgcacatgc	caccatgcct	acttagtaaa	gatggggata	ctctgtgtta	23460
ctcaggatgg	tcttgaaact	ctgggttcaa	gcgatcctcc	tggcttgga	tcctcaaatca	23520
cacctgggat	tgcagggtgc	agccacctcc	ccatgcctct	ccctttttta	aaaaagtgtg	23580
tcttatagag	caggtctatt	agcaacatac	tcctcagtt	ttcatttgct	ttggaaggta	23640
ttttgctttc	acttgtgaag	aatagttttg	ctaaatatag	aatttgtggg	ttatagttct	23700
gtttttttct	gtcgggtact	tgaacatgtc	atttcattgt	cttctatcca	ttgtttcatg	23760
agagccttaa	aaggtgatag	ggtcaccatg	catccgtagc	tctctcattt	acataatctt	23820
tccattaaat	ttctgactgc	ttaagcactt	atcctaacca	ggatctcaac	ctcagaccaa	23880

ctgcaaagtt	tctctcttta	ttcccaacca	agcctagcac	ttttatccac	caaagctaca	23940
gggttttact	gccctaccgg	gaaatgagcc	cacccttttt	agcaacaaac	tgctagggttc	24000
tttttggttag	tttcatgttg	gtatgggttg	agcattttatg	atcaaaaaat	acaaaatctg	24060
aaatgctcca	aaatctgtaa	cttttgagca	ccaacacaat	gctcaaagga	agtgttcact	24120
ggagcatttt	ggatttcaga	tttttgaggt	aaggatgctc	agccagtgtg	tattctgcaa	24180
gtattccaaa	atctgaaaaa	aatccaaaat	ctgaaacact	tctagttcca	agcatttttg	24240
acaagggata	ttcagccagt	aaaattgcc	ggctcatcat	cctagctggg	aggggggttt	24300
aggagcaacc	tcaggccaaa	gggcacagct	tcttaccttt	catacttaga	actttagcag	24360
cttttctaga	ctaaagactt	ttctctttgt	agtcttcttt	tggttaattt	ccagtcctct	24420
gaaatgggtg	tttttgataa	ttttatccag	ttttatcctt	aatattttgtg	gaggggaatt	24480
gccaacctct	tcagtgtgcc	acaaaatctg	catgttgtct	ttgcagatga	attttatatt	24540
tacttatcaa	gtttcctaag	aagtcctctt	ggatttttga	ttgaatttac	attgactttg	24600
taaatttgca	gcgcacaaac	atacttataa	tattgagatt	tcctccagg	aacatggcat	24660
ttatctccat	ttatttggt	atactttaca	tctctcagca	aaattattta	acacacatat	24720
atgacttgct	tatatatttt	ttgtttgttt	gtttttgtgt	tgagacgaag	tctgtctctg	24780
tatcccaggc	tggcgtgcag	tggcgcgatc	ttggctcact	gcaacctcca	cttcccagg	24840
tcaagtgatt	ctccttctct	agcctccaga	gtagctggga	ttacggcgtg	cgccactgca	24900
cctggctaac	tttttgatt	tttagtagag	acgaggtttc	accatgttgg	ccaggctggt	24960
cttgaactcc	caacctcagg	taatccgccc	acctcaacct	cccaaagtgc	taggattaca	25020
ggcatgagcc	accgcccctg	gccttatgac	ttgcttatat	tttgctaagc	ttattcattt	25080
atgtttttct	ggtgattgct	gatgaaatta	acgtttccat	tgtagtttct	aattatttat	25140
tgccagtttg	taggaaagta	agtttgtttt	tataagtttg	tataagttga	tctttttttt	25200
tcttttgaga	tggagcctca	cgctgtcgcc	caggctggag	tgcaagtggca	taatcttggc	25260
tcactgcaac	ctcgtctctc	tgggttcacg	cgattcttct	gcctcagcct	cctgagtagc	25320
tgggactaca	ggcatgcacc	accacgcctg	gctaattttt	atatttttag	tagagacaag	25380
gtttcaacat	gttggccagg	ctgatcttga	actccttacc	tcatgatctg	cccacctcgg	25440
cctcccaaag	tgttgagatt	ataggcgtga	ggcatcgccg	ccagctagtt	gattttatat	25500
gtgactgcct	tgctgaactt	acttttggtt	tgtcagttta	ttattttggt	tatttttaagt	25560
agtgtactat	tatttgcaaa	tgatgcaatt	ctatctcctt	gtaatctata	tttgattttc	25620
ttatttttaa	aagtttatca	tttaggttct	gacctctagg	aaaatagtaa	aacattaggt	25680
atacttgcc	tagtgatttt	gctggaaata	tttctaatat	ttcttttatt	ttttattttt	25740
atttttttga	gacggagtct	tgctctgtga	cccaggctgg	agtgtagtgg	cgtgatctag	25800
gctcactgca	acctccacct	cccaggttca	agagattctc	ctgcctcagc	ttcccagagta	25860
gctgggacta	cagttgtgtg	ccaccacgcc	cagctaattt	ttttattttt	tgtagagata	25920
gggggttttg	catgttggcc	aggctgggtc	cgaactcctg	acctcagggtg	atccacctcc	25980
ctcggcctcc	caaagtgtcg	ggattacagg	tgtgagccac	tgcgcccggc	tatttctaata	26040
atttcgtcat	gaagtataac	atagtcttgg	tccttctatc	cagcttataa	atttttattt	26100
cttattttta	ttcccaatat	caactgacat	tttggcatac	actgacatca	taatgctttt	26160
ctctattgat	ttcctaatac	cttaagtaag	aaagacccta	tttgatcaag	gtgtattata	26220
attttaatat	tttcctaggt	taagttaccc	ctatttgatt	aaggtgtatt	ataattttta	26280
tattttccta	ggttaagtta	cccctatttg	attaaggtgt	attataattt	taatattttt	26340
ctaggtttaag	tttgcatata	tatatatata	cacacacaca	tatatatata	cacatatata	26400
tacacacata	tatatacaca	catatatata	cacatatata	tacacatata	tatacacata	26460
tatatacata	tatatacaca	tatatatata	cacacatata	tatatatata	cacacacata	26520
tatatatata	tatatatata	tttttttttt	ttaggttttt	tttttggttg	ttttgaggtg	26580
gcctctcact	ctgttaccga	ggctggaatg	cagtgggcgca	gtctcggtc	actgcaacct	26640
ctgcctcttg	ggtttaagcg	attctcatgc	ctcagcctcc	cgaatagctg	ggattacagg	26700
tgtgcgctac	cacacctagc	taatttttgt	atttttagta	gagatgggtt	atcaccattt	26760
tggccaggct	ggtctctaac	tcctgacttc	aagtaatttg	cctgactcgg	cttcccaaa	26820
tggtgggttt	acaggcgtga	gcctccatgc	cgggctgagt	ttgctaattg	tttattttaca	26880
atttttgcat	gtaattcaca	agtgggattg	gcttataaag	aacaatgcct	tggtgaccag	26940
acattcattc	tagattaaaa	gaattatata	tttctctctc	ttcaaaaatt	tagtgtagga	27000
actattcatt	attctcgtat	tagttttatt	tgtctgtctg	attaaactaa	taacctgtag	27060
taaatggcat	ccttttttga	acagtacaaa	cacctaaaac	ccaatttggt	tattttattt	27120
tttttgagaa	gtctcactgt	gtcaccagg	ctagagtgc	gtggggcgat	cttgggtcac	27180
tgtaacctct	gcctccgaga	ttcaagtgat	tctcctgcct	cagcctccca	agtagctggg	27240
attacagggtg	tatgctacca	cacccacct	atttttgtat	tattagtata	gatgggggtt	27300
caccatgttg	gccagggttg	tcttgaactc	ctgacctcaa	gtgatcaacc	tgccctggg	27360
tcccaaagtg	ctgggatttc	aggcatgagc	cactgcccc	gggcctccag	tcctttatgt	27420
acgatgatta	ttatttttagc	cttctgagtt	tttctgttac	tgcatattcc	tccgtgtgtc	27480
ttccctgtat	tagatgattt	ttctttgaaa	gaccttcaag	gattgtttaa	tatttgtcgg	27540

tgtctgtgtt	aaattgtgtg	tttcttatat	tagatgattt	ttatttataaa	tatctttaag	27600
agctgggcac	ggtggctcac	gcctgtaatc	cctgcacttt	gggaggttga	ggcgggtgga	27660
tcatttgaag	tcaggagttt	gacaccagcc	tggccaacat	gatgaaaccc	tgtctctact	27720
aaaaatacaa	aaattagacg	ggcatgggtg	tacacacctg	taatcccagc	tactcaggag	27780
gctgaggcag	gataattgct	tgaacccgag	aggcggaggt	tgcagtgagc	gaagatcgtg	27840
ctactgcact	ccagcctggg	tgacacagca	agactccatc	tcaaaataag	taagtaaata	27900
aataacaaaa	tatctttaag	aattgttggc	tgggcgtggt	ggctcacgcc	tgtaatccca	27960
gcactttggg	aggccgaggc	gggcagatca	cgaggtcagg	agatcgagac	catcctggct	28020
aacacagtga	aaccccatct	ctactaaaaa	tacaaaaaat	tagccgggcg	tggtagtggg	28080
tgccgtgtag	cccagctact	cgggaggctg	aggcaggaga	atggcatgaa	cccgggaggt	28140
ggagcttgca	gtgacccgag	atcgtgccgc	tgcactccag	cctgggcgac	agagtgaagc	28200
tccatctgag	aaaaaaaaaa	aaaaagttta	acatttgtcc	atctctttat	gacatcataa	28260
aaaatatata	tttgggtccct	gcctcttggt	attagcatag	agctcctaaa	acccatgtaa	28320
ttttctgagt	gatggggtgc	taggttcctc	ttttgttaaa	ttatttggat	tttgacccag	28380
gttcctgaca	cagagctcct	aatcccttgg	aatttcctat	gtaataggaa	aatcttttgt	28440
tctaattgag	caactcttga	tgggctcttg	ggtggtggct	ggccaccaga	aagaccaagc	28500
tatgactagt	tgtctggaac	ttgcagcacc	cctccccatc	atthttgatag	gggctggaga	28560
ctgacttaat	aatcaatcat	gctgggtcca	ctggcttacg	cctgtaattc	cagcactttg	28620
ggaggccgag	gtgggaggat	cgttgagcc	caggagctca	agaccagcct	gggcaacata	28680
gatagtgaga	ccctgactct	aaaaacaaca	acaacaaaaa	tagccattcg	tgggtgctgc	28740
ggcctgtggt	cccaactact	tgagaggctg	aggtgagagg	atcacatgag	cctaggaagt	28800
ggaagctaca	gtgagctaag	gttgtgccac	tgcactctcc	agcctgagtg	acagaacaag	28860
accttgtctc	aaaaaaaaaa	aaaaaaaaaa	aatccgccag	gcatagtagc	tcatgtctgt	28920
aaatcccagc	actttgggag	gctgaggtgg	gtagatcact	tgagcccagg	agttcaagac	28980
cagcctgggc	agcaagggaa	aaccccatct	ttacaaaaaa	ataacataaa	aaattagtca	29040
ggcttggtgg	catgtgcctg	tgtcccagct	acctagaagg	ctgaactgga	ggatcgttgg	29100
agcccaggag	gttgaggctg	cagtgaagca	tgaattgcgc	attgcactcc	agcctgggtg	29160
acaggaagca	acctgtcta	aaaaaaaaaa	aaaaacccag	tcatgcctgc	tagataaaac	29220
ctccataaaa	ttcctgtaac	tatgaggttt	ggagaacttc	tgggttgctg	aacacttgga	29280
gggagaaggc	atggaaaactc	tgtgctcctt	ccccggtatc	tttccctaga	catctctttc	29340
atttgccctc	tctgattttg	catcttttta	ttaaaaatgg	gtaaatatgg	ctgggcgcgg	29400
tggctcacgc	ctgtaatccc	agcacttttg	gaggccctag	cgggtggatc	acctgaggtc	29460
aggagttcaa	gatcagcctg	gccaacatgg	tgaaacccct	tctctactaa	aaatacaaaa	29520
attagccagg	cgtgggtggt	tgtgcctgta	gacccagcta	ctcaggaggc	tgaggcagga	29580
caatcacttg	aacctgggag	gcggagggtg	cagtgagccg	agatcgtgcc	actgcactcc	29640
agcctgggca	acggagtgag	actccgtctc	agaaaaaaaa	aaaaaggggg	aaatataagc	29700
gaggtattta	tctgattcct	gtgagccatt	gaagcaaatg	gtcaaacctg	aggagggggg	29760
tgtagaaacc	cccaacttat	agctgatttg	ttagaaatat	gggagtcctg	gacttatgat	29820
tggcatctgt	gtggagactg	tcttatggaa	ttgagccctt	aacctgtggg	atctaattgct	29880
aactccgggt	agataatgac	agaactgaat	tagaggacac	atagctgatg	ttagagaatt	29940
ggtaagcata	ggccgggccc	agtggctcac	gcctgtaatc	ccagcacttt	gggaggtcaa	30000
ggtgggaggc	tcacgaggtc	aggagatcga	gaccatcctg	gctaacacag	tgaaaccccg	30060
tctctactaa	aaatataaaa	aaaaaataaa	ttagccaggt	gtggtggcag	acacctgtag	30120
ttccagctac	tgggagggtc	gaggcaggag	aatggcatga	accaggagg	cggagcttgc	30180
agtgaagcca	gattgcgcca	ctgcactcca	gcctgggcca	cagagtgaag	ctccgtctca	30240
aaaaaaaaaa	aaaaaaaaaa	aaaaagaatt	ggtaagcata	ggagaaaccc	acaagtttcg	30300
tgatggaagt	gacctatgga	gtgttgtgag	agtatataag	aggcataaac	agtttgtttt	30360
ttctctgtac	actctgtttt	tctttttctt	tctttctttc	tttttttttt	gagaggagcc	30420
tcgctcttgt	ccccagggtt	tgagtgcaat	ggctttatct	cggctcactg	caacctccac	30480
ctcccagggt	caaatgattc	tcttccctct	gcctcccaag	tagctgggat	taagggcctg	30540
ccaccaagcc	cggctaaatt	ttgtattttt	tagtagagac	agggtttcac	catgttggcc	30600
aggctgggtc	cgaactcctg	acctcagatg	atccacctgc	ctcagcctcc	caaagtgtct	30660
ggatttcagg	cgtgagccac	cgcgcccggg	cactgtacac	tctgtttttc	tttgggtacat	30720
gtagtctctt	tctctcttat	cataagcttt	gtgttatgtt	cttcttcatg	ttttctctct	30780
cattgtagtt	ccttctgtta	cctactctgt	gaagcctttc	ttggtttctc	ctcttcatca	30840
ctactctctg	aagagctgga	ctatttctgt	ctctaataata	gcttattata	aattatcatt	30900
atacctatag	ttcccttaac	tacatcttgg	ctataataacc	agaactttcc	tgttattttt	30960
tggttgtaaga	acagtctcat	ttttggtaat	taagacttag	tcttatgcat	tttaaaaaact	31020
tcagtataaaa	ttcattcttc	ttgcaggagg	tatgatgggt	gagggtgtct	gactctccac	31080
atattctccc	tttttcatgt	gttggggcag	agagtgaaaa	aaggcagaca	tataattagg	31140
ctgggtgaag	tcgtctttta	ggttgtggct	tcctctctaa	catggagtgt	tcattcatgcc	31200

ttattgtgag	gcatttaaat	tttgtttcat	tgccatgtgt	agattcttcc	tggttcaatc	31260
tgttggcagc	ttactggcaa	ctctctgaac	taagaatata	tagtaataat	tagcatattt	31320
tgtgcttaat	ttaagcctga	ggtaaaattg	ggactacagg	aaattttcat	tcagtgtccc	31380
gtgaaattta	ttttaaagtc	agcatctcac	aggaaaataa	tcagtcttct	agaagagagt	31440
attatgtcat	gtagatatta	cagagcacct	ttcagtgcac	aggtttcata	ctcgtaatgt	31500
taaatctcta	ttttaaagta	atacaacatt	tagggacctt	catectagca	tatccatagt	31560
ctagaaccac	ttcagatgtc	ctattttaa	gtaaattaat	ttaaatgtac	attaatgaaa	31620
cttaataaac	attaaaaatt	cagttcctga	gtctcagtag	ccacatttga	agtactta	31680
tagccacctg	tggctagtgg	ctactatatt	ggatagcaca	gacattttga	tcattgaagt	31740
aagtgcctct	ctagtggata	gaggttaagaa	atttttctta	ccataggaaa	gtcagataca	31800
tggagtcaat	catgtacacc	aactaggtac	tctgtttcac	aagggttttt	ttcttgccca	31860
tgtgagggaa	gtttgaaagg	cagaaaagtt	gccacacacc	tgtacaagat	actgctttca	31920
aattcatctg	atatttagct	ctttgaaagt	gtcagacaac	tactagtgc	aacatagggt	31980
ttgcagcagg	attaagactt	caaataatttc	caccagcag	agacagaccg	tcttggtcat	32040
ccttctctatt	tccttttcta	ctgttccctc	ttccttcagt	ccttaggact	gaagggttgg	32100
cacaacttcg	gttgacaggg	taagacttgg	gataagttga	aaagcaa	tttgaatata	32160
tgtgttgagg	tgtgtgtgtg	tgtgtgtgtg	tgtgtagatt	ttgagagaag	tggtttaact	32220
cctagaataa	taaatttcta	ttattttttc	taccaagccc	ttaggtatca	tctaattgaa	32280
tgctgcccc	cattttacat	ataagtaaac	tgaggttggg	gaaagtgatt	gcctaagacc	32340
atacagctaa	tggtagactt	gggactaaaa	tcttgtttcc	atgactccaa	caccaatggg	32400
ttttctctctg	aatcattttac	ctttcccat	ttaatccata	attcactact	acctattgtt	32460
acaaatacaa	tggcaagagt	ttagaggtat	gaataactaa	ttattgta	gaatttctca	32520
tttaataaaa	tgttgctttt	atgtattttta	aagaatttgg	taattgcaat	tgttatagat	32580
tgaagaagaa	gagaggaaaa	aaatagaaga	tatgaaagaa	aatgaacgga	taaaagccac	32640
taaagcattg	gaagcctgga	agaatatca	aagaaaagct	gaggagcaaa	aaaaaattca	32700
gagagaagag	aaattatgtc	aaaaagaaaa	gcaaattaaa	gaagaaagaa	aaaaaataaa	32760
atataagagt	cttactagaa	atttggcatc	tagaaatctt	gctccaaaag	gtaaaatgat	32820
taagaatttc	ttgagtagt	agtctgttg	gtgaaattata	tatgacgctt	ttcttttttt	32880
gtaaatctat	tcacagcatt	aggttactgt	tttggcacat	tgagaataag	caattcagta	32940
caaagactaa	agtaaagaca	tttcttcttt	cggggataat	gaagttttct	aataaaatga	33000
gcaaggattc	gttcaaggat	tcgaaaagaa	gagtgtcttc	tttgcttgtg	tgctttcttt	33060
tgaaatttac	aaagatgttg	ttaaataagt	gcttaactca	ggcccaaaaa	gacttggagt	33120
ggactagcaa	tgtcagaagc	attcattttat	tccattagag	ataagaaact	aggaatttca	33180
ttaaaagacc	ttttcttcac	atcacttagg	aaaatgagta	ctataagcag	acttactcta	33240
cagcaaataa	agattgtctc	tagcttttaa	tcttggtgta	ttcaaaaaca	gataaattaa	33300
tataattttt	ttttttgaga	caaggtctgg	ccctatcgcc	caggctggag	tgcaatgggtg	33360
tgatctgagc	tcactgcagc	ctctgcctcc	ccagctcaag	ccatcctgcc	ttagcctccc	33420
aagtagctgg	gactacaggc	atgtgcctca	atgtccagct	aatgcttttt	tgtatttttt	33480
gtagagacga	ggttttgcca	tgttgcccag	gctggctctg	aactcgtgag	ctcaagcaat	33540
ctgcctgcct	tggcctccca	aagtgtctgag	attgtgtgca	tgagccacca	tgtccagctg	33600
atacaaatat	aattcagttt	ttgtatgtgt	gtgtttttaa	aattattatt	tcagtagttt	33660
tggggaaaca	ggtggtgttt	ggttacatgt	ataagttctt	tagtgggtgat	ttctgagatt	33720
ttggtggacc	catcaaccaa	gcagtgtaca	ctgcacccaa	tgtgtagtct	tttatccctc	33780
acccctgcac	ccttcccccc	tagtccccag	gcccatatca	ttcttatgcc	ttggcatcct	33840
catagctcag	ctcccattta	tgagtgaagaa	catgggcag	gagcagtggc	tcatgctcgt	33900
aatcctaaca	ctttgggagg	acaaggcggg	cagatcatct	gaggttggga	gttcgagacc	33960
agtctgacca	atatggagaa	accccatctt	tactaaaatt	acaaaattaa	ccagggtgtgg	34020
tggcacatat	ctgtaatccc	agctactcag	gaggccgagg	caggagaatc	gcttgaacct	34080
gggaggcgga	ggttatgggtg	aaccgagatc	gtgccattgc	attccagcct	gggcaacaag	34140
agcaaaactc	tgtctcaaaa	aaaaaaaaaa	aaaaagtgag	aacatatggg	atgttggttt	34200
ccatttctga	gttacttcat	gtagcataat	cgtctccaac	tccatccagg	ttgccgagaa	34260
tgccattatt	ttattccttt	ttatggctga	gtagcattcc	atgattgtat	gtgtgtctgt	34320
gtgtgtgtgt	gtgtgtgtgt	gtgtgtatat	atacaccata	ttttctttat	cttctcatta	34380
gttgataggc	atttaggcta	gttctatat	tttgcaattg	caattgtgct	gctataaaca	34440
tgagtgtgca	agtgtcta	gacttctttt	tctctagata	gataccaggt	agggggattg	34500
ctggatcaaa	tggcggttct	acttttcgtt	ctttaaggca	tctatctcca	cactgtcttc	34560
catagtagtt	gtactagttt	acattcccac	cagcagtgtg	aaagtgtccc	ttttcaccac	34620
atctacacca	acatctgtta	ttttttcatt	tttaaatat	ggtcattctt	aacaggagta	34680
aggtgggtatc	gcattgtggg	tttgatttgc	atttccctaa	taattagcgg	tgttgagcat	34740
tttttcatgt	ttgttgga	tttgtttgtt	tgtttattta	ttttgagatg	gaatttgcgt	34800
cttgttgccc	aggctggagt	gcaatggcac	gatctcggct	caccacaacc	tctgcctccc	34860

aggttcaagc	gattctcctg	cttcagcctc	ccgagtagct	aggattacag	gcatgtacca	34920
ccatgcctgg	ctaattttaga	gatgggggtt	ctccatgttg	gtcaggettg	tctcgaactc	34980
ttgacctcag	gtgatccgcc	tgcctcagcc	tcgaaaagtg	atgggattac	aggcatgagc	35040
caccacacct	ggcgggacat	ttgtatatct	tcttttgaga	attgtctatt	catgtcctta	35100
gcccactttt	tgatgggatt	gtttgttttg	ttcttgctga	tttgtttgag	ttccctgtac	35160
attgtggata	ttagtccttc	gtcagatgca	tagtttgtga	agattttctt	ccattctgtg	35220
ggttgtctgt	ttactgtgct	gattatttct	tttgctgtgc	agaagctttt	tagtttaatt	35280
aagtcccatc	tatttatctt	tgttttttgt	tcatttgcct	ttggattctt	ggccatcaag	35340
tctttgccta	agccagtgtt	agaaggggtt	ttccagtgtt	atcttctaga	atttttatga	35400
tttcagggtc	tagacttaag	tctttgatcc	atcttgagtt	aatttttgtg	ttaggggaga	35460
gatgaggatc	cagtttcata	cccctacatg	tggtttgcca	attatcccag	caccatttgt	35520
tgaatagggt	gtcctttccc	cactttatgg	ttttgtttgc	tttgtcaaag	attggttggc	35580
tgtatttgac	tttatgtctg	ggttctctat	tctgttccat	tggcctatgt	gcctgttttt	35640
ataccagtac	tatactgttt	tggtaactgt	ggccttgtag	tatagtttga	agtcaggtaa	35700
tatgatcccc	tcagatttgt	tcttttttgt	tagtcttgct	ttggctatat	gggctctttt	35760
tttgttctat	atgaatttta	ggattgtttt	ttctagtctt	gtgaagaatg	atgatgatat	35820
tttgatggga	attgcactga	attttagatg	tgcttttggc	agtatgggtc	ttttcaaaat	35880
actgattcta	cccactctgt	agcatgggat	gtatttccat	ttgtttgtgt	catctatgat	35940
ttctttcagc	agtgttttgt	agttttcctt	gtgagatcct	tcacctcttt	agttagggtat	36000
attcctaagt	attttgggtt	tttgttttgt	tttttgggtt	tttttgcagc	tgttgtaaaa	36060
gaggttgagt	tcttgatgtg	attctcagcc	tggctcctgt	tgggtgatag	tagtgctact	36120
gatttgtgtg	cattgatttt	gtattctgaa	actttacttg	aattcatata	tcagatctag	36180
gagctttttg	gatgaatctt	taggattttc	taggtatacg	atcatatcat	tggccaacaa	36240
tgacaacttg	acttcctcct	tactgattta	gatgctcttt	ctttctttct	cttgtctgat	36300
cgctctggct	aggacttcca	gtactctgtt	aaatagtgtt	ggtgaaagtg	gacatccttg	36360
tcttgttcca	gttctcaggg	gaaacacttt	caacttttca	ctgtttatta	taatattggc	36420
catgggtttg	tcaaagatgg	cttttattac	cttaagggtat	gtcccttctg	tgccccattt	36480
gctgagggtt	ttagtcataa	agggatgctg	gattttgtca	aatgctttgt	gtgtgtgtgt	36540
gtgtgtgtgt	gtgtgtgtgt	gtgtgtgaga	cagagtctca	ctgtgttctt	taggctggag	36600
tgcagtggca	tgatcttggc	tcactgcaac	ctctgcctcc	caaattcaag	cagttctcct	36660
gcctcaacct	ccccagtatc	tgggattaca	ggtgtgcacc	accacaccta	gctaactttt	36720
tgtatttttt	agtagagaca	gggtttcgcc	atgttggcca	ggctggcctc	aaaactcctg	36780
acctcaaatg	atccgtctgc	ctcggcttcc	cgaagtgtct	ggattacagg	catgagccac	36840
cacactcggc	ctcaaagtct	ttttctgcat	ttattgagat	gattgtatga	tttttgtttt	36900
gacttctgtt	tatgtggtgt	attatattta	ttgatttttt	gtgtgtgtat	gttaaaccag	36960
ccctgcaccc	ctgggtatgaa	accacttaa	ttatggtgta	ttaccttttt	gatatgctgt	37020
tgcatttggc	tagctagtat	ttggttgagg	agtgttacat	ctgtgttcat	cagggatatt	37080
gttctgtagt	tttctttttt	ttttttttgt	tatgtccttt	cctggttttg	gtattagggg	37140
agtaactggc	ttgtagaatg	atttagggag	gatttcctcc	ttatcttttg	aaatagtttt	37200
aataggattg	gtaccagttc	tcttagaatg	tctgttagaa	ttcagctgtt	gggctgggca	37260
catggctcat	acctgtaatc	ccagcctttg	agaggccaag	gcaggcaatc	tcctgagggtc	37320
aggagttaa	gaccagcctg	cccaacgtgg	tgaaacctca	tctaactaaa	aatacaaaaa	37380
ttagcagggt	gtgggtggcat	gtgcctgtaa	tcccatctac	tcgggaagct	gaggcaggag	37440
aatcgcttaa	acccggagat	ggaggttgca	atgagccgag	atctcaccac	tgcatctccag	37500
cctggggggc	agagaacaag	accctgtcct	aaaaaaaaaa	aaccagctgt	gaatccatct	37560
ggctcctggc	tttttttagt	tggccatttt	taaattactg	tttcaatctc	cctacctgct	37620
atttggcttt	tcagagtttc	tatttcttcc	tggcttaatc	tgggaggatt	gtttaattcc	37680
ttctagggtt	aggaatttat	ccatctcctg	taggtttttt	agtttgtgtg	cacaaaggta	37740
ttcatagtag	ctttgaatga	tcttttgtat	ccctgtggta	tttgttgtaa	tttctctcat	37800
ttcatttcta	atcgagctta	tttggatcct	attcttttct	gggttaatct	tactaatggg	37860
ctatcagttt	tgtttgtctt	ttcaaagaac	cagcattttg	tttaattttt	cttttgtatt	37920
tttttctttc	agtttcattt	agttctgctc	tgatctttgt	tatttctttt	cttgtgctgg	37980
gtttgggttt	gatgtgttct	tttttctcta	gtttcttgat	gtgtgagcct	agattgtctg	38040
tttatgctct	ttcagacttt	ttgatgtagg	cgttttagtc	tatgaacttt	cctcttagca	38100
ctgtttttgc	tgtatcccag	aggttttgac	tggttgtgtc	actattatcg	ttcagttcaa	38160
agaattttta	aatttccgtc	ttgatttcat	tgttgacca	aagatcattc	aggggagagg	38220
tacgtaattt	ccatatattt	gtatagtttt	gagtgttctt	tttgaagtca	atatccagtt	38280
ttattccact	gtgggtcttag	agagtatttg	atataatttt	gattttctta	aatttactga	38340
gatgggctgg	gcgtgggtgg	tcacacctgt	aatctcagta	ctttgggagg	cctaggtggg	38400
tggatcacga	ggtcaggaga	tcgagaccat	tctgggtctt	aaccagagac	cagaatctgg	38460
tggctaacac	gggtgaaacc	catctctact	aaaagtacaa	aaaattagcc	aggcgtgggtg	38520

gggggcacct	gtagtcccag	ctactcggga	ggctgaggca	ggagaatggc	atgaacccag	38580
gaggcgaggt	ttgcagtgag	ccgagactgc	accactgcac	tccagcctgg	gcaacagtgc	38640
aagactctgt	ctcaaaaaaa	aaaaattatt	gagatggctg	ggcgagtggt	ctcatgcctg	38700
taatcctagc	actttggggag	gccaggggaag	gtggatcacc	tgagggtcagg	agtttgagac	38760
cagcctggcc	aacatggtga	aaccttgtct	ttactaaaaa	tacaaaaatt	aggctggtgt	38820
ggtggcgggg	gcctgtaatc	ccagctgctt	gggaggctga	ggcagaagaa	tcacttgagc	38880
ccaagagggtg	gaggttgcg	tgagtcgaga	tcacgccact	gcactccagc	ctgggtgaca	38940
aagcgaggct	ctgtctcaaa	aaaaaaaaaa	aattattgag	acttgttttg	tgttctatca	39000
tttggtttat	cttggaatga	atgttccatg	tgctgatgaa	aagaatgcat	attctgcagt	39060
tgttgggtag	aattattctgt	aaatatctat	taagtccatt	tgttctagga	tatagtttaa	39120
atccattatt	tctttgttga	ctttctgtct	tgattacctg	tctagtgtctg	tcagtagagt	39180
actgaagtcc	tccactatta	ttgtggtgct	atctcatttc	ttaggtctaa	taataactgt	39240
tttataaatt	tgagaattcc	ggccggggcg	ggtggctcat	gcctgtaatc	tcagcacttt	39300
gggaggccga	ggcgggtgga	tcacgggtgg	tcaggagttt	gagaccagcc	tgaccaacat	39360
ggtgaaaccc	cgtctctact	aaaaacacaa	aaattagccg	ggcgtgctgg	cacgcacctg	39420
taatcccagc	tactcaggag	gctgaggcag	gagaattgca	tgaatctgga	ggtggagggt	39480
gcagtgagcc	gagactgcac	cacggcactc	cagcctgggc	gacagagtga	gactctgtct	39540
caaaaaaaaa	aataaataaa	taagtaataa	aataaataaa	taaatttgag	agttctagtg	39600
ttaggtgcat	aaatatttag	gattgtgata	ttttcctggt	ggactaattc	ttttatcatt	39660
atataatgtc	cttttttatc	ttttttaact	gttggtgctt	taaagtctgc	tttggtttgt	39720
ataagaatag	ctattcctgg	ctaggcgag	tggtcacgc	ctgtaatccc	agcacttttg	39780
gaggccgagg	cgggcagatt	acgaggtcag	gagtttgaga	ccagccaggc	caacatggtg	39840
aaactctgtc	tctactaaaa	atacaaaaat	tagccaggcg	tggtggcgcg	tgctgtagt	39900
cccagctact	tggaaagcta	aggcaggaga	atcgcttgac	cccaggaggc	agagggttga	39960
gtgagccaag	attgcaccac	tacactccag	cctgggcaac	agaaggagac	tctgtctcaa	40020
aaaaaaaaaag	aaagaaagaa	agaaagaaaa	aagaatagct	actcctgctg	actttggtgt	40080
tcatttgcat	ggaatatctt	tttccaccct	gtttatgagt	ccttatatgt	taggcaagtc	40140
tggtaaagaa	cttacttggt	tggttgattt	ttatccattt	gacattctgt	atcttttaag	40200
tggaagcattt	aggccattta	cattcaatat	cagtattgag	atgtgaggta	ctgttctatt	40260
catcatgcta	gttggtgctg	taccttattt	tttttcattg	tgttattgtt	ttatagatcc	40320
tatgagattt	atgttttaag	gaggttctat	tttggtatat	tttgagggtt	tgtttcaata	40380
tttagaactc	cttttagcat	ttattgtagt	gctggcatgg	tagtgacaaa	ttcagcattt	40440
gtttgtttga	aaaagacttt	atctcgcttc	tggttatgaa	gcttagtttc	actggataca	40500
aaactcttag	cggataatta	ttttgtttta	ggaggctaaa	gataggacc	ccatcccttc	40560
tggtctgcag	ggcttctgct	aagaaatctg	ctgttaatct	gataggttct	cctttataga	40620
ttacctgggtg	cttttgcttc	acagctcttt	tttttttttt	ttttgagaca	gagtcctgct	40680
ctgtcaccca	ggctagatgtg	cagtgcgtg	atctcggttc	actgcaacct	ccaactcccg	40740
ggttcaagca	attctcctgc	ctcagcctcc	tgagtagctg	ggattacagg	cacctgccac	40800
cacgcctggc	tgatttttgt	attttttagta	gagatggtgt	ttcaccatct	tggttggtcca	40860
ggctggtctc	gaactcctga	cctcgatgc	caccgcctt	ggcctcccaa	agtgtgaga	40920
ttacagatgt	gggccaactgt	gcctgacctt	gcctcacagc	tcttaagatt	ctttctttca	40980
tctttacttt	agacaatgtg	atgactatgt	gcctaggcaa	tgatcttttt	gcaatgaatt	41040
ccccgggtgt	tctttgagct	tcttgtattt	ggatgtctag	atctctagca	agaccatgga	41100
agtttttctt	gattattccc	tcaagtatgt	tttccaaact	tttagatttc	ccttcttctt	41160
caggagcacc	aattattctt	atgtttgctt	gtttacataa	tctcagattt	cttgagggtc	41220
ttgttcattt	tttaaaattc	tttttttctt	tgtctttggt	ggattgggtt	cgtttgaaag	41280
ccttgtcttt	gatctctgaa	gttatttctt	ctacttggtc	aaatctattg	ttgaaacttt	41340
ccagtgtatt	ttgcatttct	ttaaagtgtg	ctttcatttc	cagaagtgtt	gattattttt	41400
tctttataat	atctatttct	ctggagactt	ttccattcat	atcctccttt	ttttaaaaaa	41460
ttctttaagt	tgattttcac	cttcctctag	tgcttctctg	aggagcttaa	taatcaacct	41520
tctgaattat	ttatctggca	attcacagat	ttcttcttag	tttgatcca	ttgctggaga	41580
gctagtatga	tcttttgggg	gtgttacaga	accttgattt	gtcatattac	tagaattact	41640
tttctgggtc	cttctcattt	gagtagactg	tttcagtgg	aagatctgga	actcaagggc	41700
tactgttcag	attcttctgt	cccatgggtg	ttcccttgat	tggtgacct	ccccctggca	41760
ctagggatgg	ggcttctgga	gagccagact	gcagtgattg	ttattgcctt	tctatttcta	41820
gccaccaggt	tggtggcccg	gctggtgctg	gggaatgtct	gcaaagagcc	ctgtgatgtg	41880
atccacaggt	ctcccagccg	tggtatccag	cacctgttct	ggtggtggca	ggtgagtga	41940
gtggattctg	ttggagtctt	ttgttgtaat	tttgtttagt	gcacttcaag	tactgggttat	42000
gtaagcagtg	aagtgtcac	gtggacagat	tcaggacctc	tggttagaca	gggtgttgca	42060
ggaagtggaa	ttagctgttg	ttttctcctt	ctttggagca	gggtgttctt	gttatgagtt	42120
gctatggtgg	cttgagttcg	ttgggtctca	gccaggaggt	ggcactttca	agagggcacc	42180

agctgcagta	tagaagagag	atataatcct	gatgttggcc	gggacaagta	ctcgggtttc	42240
tcaggtgatg	ggcagggcca	tagagcaggt	agagaaaacc	ttgccccatc	aggtggggggc	42300
aaggttagtt	gggtctgggc	tcaggtctcc	cttgggtggg	gcttgctgtg	gccacagtgg	42360
gggtggaggg	gattctcagg	ccaatggaat	tatgttccca	ggggcattat	ggctgcctct	42420
gctgtgctat	acaggtcacc	agggaggtgg	gggaaagctg	gcagtgcacag	gcctcaccta	42480
gctcccaggc	agccaccaag	gccagtctca	ctctggccat	gccaccccaa	ccgcaactgcg	42540
tttatatcca	ggcagttggg	gagcaggggt	gagatcttgc	cccagactat	aagccttgcc	42600
actgagaaa	caagagggtc	gttaggcctc	accagtccct	gcctgcccac	actattggct	42660
gtggcttctg	cactgcacac	tgtacttccc	atttgccccc	tctgccacca	atttctgctt	42720
aggaaaattc	ctgctcagtc	aaaattatta	caaagtctcag	ctacaagctt	ccttcaccct	42780
gtggctcctg	cccaattcca	ctggctgcct	tcccgtctcc	aaggacctct	gtgagatcac	42840
gccaggaatg	gcttccttgg	actccagctg	gggatggaag	tacctatagg	gctcttcctg	42900
ctgcttcttc	tactttcata	ttttgctcag	ctacctaaat	ctatttcagc	tcagggtaaa	42960
gttaaatcct	tcccctgtga	tctggatttt	caggttcccc	agtggggatg	tatgttcaga	43020
gactgacctt	ttcttccctc	acactttggg	aactcacggg	ttttcagctg	tttcatggca	43080
tttgagcag	cgaaccactt	ctttcaaagg	gtctgtgaat	tctttcagtt	ttcctacagt	43140
gtttcttgcg	gtgttctga	agtgattcct	ggagtaaaag	ttcgcattgt	gagtcctccag	43200
atgctgttct	gtccatccag	gtggcagctg	catgttaatc	ctgtctccga	tctgccattt	43260
tccttcctat	ctcccaatga	atataattct	atactgaaag	ctacgagttt	ggttttatct	43320
aatttttagaa	tattaaactt	tgttttggat	gcattttccg	ccggatgcag	tggctcacgc	43380
ctgtaatccc	agaactttga	gaggctgagg	cgggcagatc	acctgaagtc	gggtgttcaa	43440
gactagcctg	accaacatgg	agaaaccctg	tctctactaa	aaatacaaaa	ctagccggac	43500
gtggtgggtg	gtgcctgtaa	tcccagctac	tccggaggca	ctgaggcagg	agaatcgctt	43560
gaacccaggg	aggtggaggt	tgcagtgaag	cgagatcttg	ccattgcact	ccagcctggg	43620
caacaagagt	gaaactccat	ctcaaaaaaa	aaaaaaaaga	atatttagta	ttttccttac	43680
ataagtcatt	attgaattcc	tataaattta	acatttttagt	gtaaaatcac	atatataata	43740
ataataatta	acatttatta	ggtgactact	atgtgccagg	ggattttatt	gcttgggtca	43800
ctcagtcctc	acaacacttc	agtctaagtg	ctgctattct	tatttttagag	gaaatagatg	43860
ttcagaaaaa	aaaaataact	atgaataagt	aaacttgtgg	gatttgaacc	cagatctggg	43920
ctgcatctga	aacctgtgct	atttccacca	ggtcatatgt	ctttacaact	ttaacagtga	43980
ggcttggcat	attgaaaagt	catttagagc	ctgggcagtg	tggctaacgc	ctataatccc	44040
agtactttgg	gaggccgagg	tgggcagatc	acctgaggtt	aggagttcca	gaccaccctg	44100
ggcaacatgg	cgaaaccctg	tctctactaa	aaatgcaaaa	attagccagg	tgtggtggca	44160
tgcgcctgta	gtcccagtta	ctcaggaggg	tgaggcagga	gaatcacttg	aaccacaggag	44220
gaagaggctg	cagtgcagca	agatcgcgcc	actgcattcc	agtgtgggtg	acagagtga	44280
acctgtctct	aaaacaacaa	aaacaaaaaa	aagtcattta	gattgaatat	atatatatat	44340
atatatatat	attcaatttg	ctaataattt	ataagcagtt	gtcacattta	tcttcatatt	44400
gaggttcagt	tatatatttc	tttcttcata	ctgttcttgt	ctagattgta	taccaaattg	44460
taccagacct	atatactata	gagcgttttt	ctttttctac	tatttgaaac	aatatagtta	44520
gataagagaa	atacctgttg	ttttaagggt	tagtaaaaact	tcccctaaaa	ctgtctagggt	44580
ctggagtttt	tttatggagg	tttttttaaa	aaaaaaaaaa	gattcagttt	ctataatagt	44640
tattgattat	tgaatttttc	caaagtcaat	tttggtagtt	tgtcttctaa	attgtgcatt	44700
ttatctattc	aaattcattt	tcataaagtt	tttatcttact	tatctgtact	ttatctataa	44760
ttatataatt	tattaatttc	taatatgttt	cttttttttg	agacaggatc	tcaccctgtc	44820
accaggatg	aagtataatg	gatctagctt	gatgcttaat	aaagtaatct	atccttttgt	44880
tctggttgtt	ttaaaattct	ttcccttggg	atattatggg	ttcattagta	taagttcaat	44940
tttatattta	tttatctcat	aatatcataa	cttggagcat	actgtcactc	agagaacttt	45000
gtcattcatc	aattctggga	atttcaaaac	tattgtcttc	aaatattacc	ttcttggctg	45060
gtaattttacc	ttcttggctc	atgcctgtaa	tctcagcact	ttgggagggt	gagttggggc	45120
aattacttga	gaccaggagt	tgcagacttg	cctggctaac	atggtgaaac	cccatctcta	45180
ctaaaaatac	aaaaatttagc	tggctgtggg	ggcacatagc	tgtaatccca	gctacttggg	45240
atactgaggg	atgggaattg	cttgaaccgg	ggaggcagag	gctgcagtga	gccaagatcg	45300
tgccactgca	ctctagcctg	ggtaacagag	tgagactctg	tctcaaaaaa	aaaaacaaaa	45360
acaacacaa	attacattat	tgtattctct	tgttttcaat	atatattttc	aaattacaca	45420
gatgtttttc	tttttttttg	agacagagtc	ttgctctgtt	gtccatgctg	gagtgcagtg	45480
gcacgatctc	agctcactgc	aacctccacc	tcctgggttc	aagcaattcc	cctgcctcag	45540
cctccttagt	agctgggact	acagatgtgc	accaccacac	caagctaatt	tttgtatttt	45600
tagaagacac	ggggtttcac	catattggcc	acgctgatct	tgaattcctg	acctcaagcg	45660
atctacctgt	cttggcctcc	caaaatcctg	ggattacagg	cgtgagccac	catacctggc	45720
caactttctt	gtattctctt	tatcttctct	agctattttc	tgtataatat	cctcagatct	45780
atcttctagt	ttataaattt	tcttcaacca	tgactaattt	tatgttatac	ttgtccaaga	45840

tggttttaaat	ttcagtgaca	atattttttca	ttttgaaagt	tctgtttttt	ggccaggcgc	45900
tgtggctcat	gcctgtaatc	ccagcacttt	ggggggccga	ggtgggtgga	tcacgaggtc	45960
aggagatgga	gaccatcctg	gctaaccctg	tgaaaccccg	tctctactaa	aagtacaaaa	46020
aattagctgg	acgtgggtgg	gggtgcctgt	agtcccagct	actcaggagg	ctgaggcagg	46080
agaatggcgt	gaaccgggga	ggcagagctt	gcagtgagcc	gagatcgcg	cactacactc	46140
cagcctaggg	gacagagcaa	gatgctgtct	caaaaaaaaa	aaaaaaaaaa	agaactgttt	46200
ttttttcaca	cctctctgtt	ctttgtcact	agcttcttag	ttttcattat	tgatgttagc	46260
ctgtctttac	tggctttaag	taagtatgtt	taaaatgatc	aatctctttc	agattgttgt	46320
gctatttcaa	agtcttgggg	agccagtcgt	cttatttgtt	gtgtctgctg	attgttcttc	46380
atactggatt	gtttctctct	gtgaattgtg	cttttttgcc	tgaccactaa	tcttctgcaa	46440
aaacttctta	gtgtgtatgt	atgaggaaat	atcatatatt	cttatttgca	aaagacttgt	46500
tgatgaggaa	tacctggagc	ttccatttct	tacaagagac	attttttcca	agcttcaact	46560
tctaagatta	gtgagcagag	atcgtataag	catccttttc	actaagagtg	atgcccactg	46620
ggcacggtgg	ctcatgcctg	taatcccagc	actttgggag	gccaagggtg	gtgggtcacg	46680
agatcaggag	ttcgagacca	gcctggccaa	catgatgaaa	cccgtgtcta	ctaaaaatac	46740
aaaaaaatta	gctgggcatg	gtgggtgcac	tctgtaattc	cagctactca	ggagggtgag	46800
gcaggagaat	cgcttgaacc	cgggaggtcc	tacccttcta	tgattctagt	ttcatttcca	46860
cctccccacc	tctgtacctc	tatcagcatt	aaatttccag	tctccagcca	ttgatattaa	46920
tctatttgca	tctaaaaatc	ttccaaacag	ctttgtgtca	gcttttgaga	tgaccctggc	46980
tttaagttcg	atgatgaagc	atttccttta	cttacttttg	aaactgaact	atatattgaa	47040
ccttttgttt	atttattttt	tatcaagaat	ttgtatgtgt	tcataacatt	ttaccttttc	47100
ataaaattgc	atgtaaaact	ttgtagtaaa	agttttaacc	tgtgttggtt	caaacagcaa	47160
atttcttttt	tatgttttgc	aatttgcaaa	tggaaaatag	aagagtttgt	aaattagata	47220
tatgagtttg	gaaattatat	atcttatttt	tactgtaact	agtggtcact	gtaatatatt	47280
ttataaacac	ataaagattt	gtttttctgt	agcaatatag	ttttttttag	ttatcctcat	47340
gggataatag	tgatgatttc	ctgcatgttc	tatatcgtat	taatcattag	tattattagt	47400
aatctgaagt	aaaatgaagt	atgcttgatt	tttactttct	attctatttt	ccttcttttt	47460
ttccttttcc	tttttttttt	tttttttttt	tttttagtga	gacatgctct	gttgtccagg	47520
ctggagtgca	gtggcgtgat	cttggctcac	tgcagcctct	gcctcccagg	ttgaagcgat	47580
tctcctgcct	cagcttccca	aatagctggg	attacagggtg	cctgccacca	cccctgacta	47640
attttttgta	attttagtag	agatgaggtt	tcaccatgtt	ggccaagctg	gtctccaact	47700
cctgacctca	agtgatccac	ccgcctcagc	atcccgaagt	gctaggatta	cagggtgtgag	47760
ccgctgcgcc	cagacctatt	ttccttcttt	tgtattacta	tttaaaaaa	ttattttacag	47820
gctgggtgtg	gtggcttaca	cctgtaatct	cagcactttg	agaggccaag	atgggaggat	47880
tgcttgagcc	caggagtcca	agagcagcct	gggcaacaaa	acaagacccc	atctctacaa	47940
aaaagcatac	aaacaaaaaa	ttagccatgt	atggtggtgg	gcacctgtag	tgccctgctct	48000
tgaaggctg	agatgggagg	attttttgag	ccaaggggtt	caaagctgca	gtgtgctgtg	48060
attgcatcac	tgcaactccag	cctcggtgac	ggtaataacc	ctgtctcaaa	aaaaaaaaaa	48120
gatattattc	acaaaaattt	tagtgtgttc	tccactgctt	tagaaaaccc	attctttttc	48180
attttgcctc	caaattcccc	actcctgggt	tcttaatgtt	atctctctgt	gttctggaac	48240
atttatttga	gtaatgtatt	cacaaaagat	gactaggtag	tgttggctga	gttctttacat	48300
acctagaaat	gtcttttgcc	attatgagtg	agcaacagtt	aacttggtga	taaaattatt	48360
gggatcttgt	attaggtagg	ttcaagccga	gcattgtaaa	ataaagcccc	aaatgtacag	48420
atcaaataaa	gataaaaatt	tagttctctt	taattgtaata	ctttgttatg	caacagtgct	48480
caacgactgt	gttctacaag	gccatcctgg	ctgatgggat	cacctctgtt	atcacattat	48540
ttggctttcc	tctttgagtc	taagagcgct	ccttcccccc	ttgccccagt	cctttgaaat	48600
gtctagtcaa	gaccttttcc	tagttttcgt	ttgtttgttt	gttgagagac	gagtctcact	48660
ctgttgccca	ggctggagtg	tatggcacga	tctcggtcaa	ctgcaacctc	cacctcccag	48720
gttcaagcaa	gtctcctgtc	ttagcctccc	aagtagctgg	gattataggt	atgtgccaca	48780
ggcctggcta	attttttatat	tttttagtaga	gacaggggtt	catcatgttg	gccaggctgg	48840
tcttgaaactc	ctgacctcag	gtgattggcc	cgccttggcc	tcccaaagtg	ctgtgattac	48900
agacatgagc	cactgcgccc	gtccttgcca	gttctcatta	gttctctttg	atggctaaaa	48960
cctcttacac	tattataaga	aagcatatag	gagataaaagt	atgtaggaga	tactgtcata	49020
gagtttaagg	agatagagat	ggtattggca	gtgggtgggtt	tgccctatgtg	cccttctcta	49080
gagttgatgt	agagttgcct	agagtatcct	cccttagagt	tgatgtgaat	taaacactgt	49140
ggttttacaa	agagaacccc	agaaaagtag	ctgaggccat	tgataaagag	caggtaggtc	49200
attagctgct	atattatcat	tgctaaattt	tgcattcttt	tcttgacagaa	aatatatttg	49260
atttatttgt	ttaggatttg	ggggtgagct	ttgatgtgta	attactttat	cagttgattg	49320
ttactagaa	aatgagaatt	aagtgacttg	tttgctacca	ttgtttttga	aggagaaaat	49380
tcagaaaata	tattttactga	gaagttaaag	gaagacagta	ttcctgctcc	tcgctctgtt	49440
ggcagtatta	aaatcaactt	taccctctga	gtattcccaa	cagctcttcg	tgaatcacia	49500

```

gtagcagaag aggaggaggt atatatactt actctagtta caattaccac aaatgaaaat 49560
actttatttt tatttcatct attgaaatta gtactgggtc tgaatttctt aagtatttat 49620
tacactaaag aaataacgtc atgaatatgt tttagaatth ccttatgaga aaatatatth 49680
tgcagatgtt tttggctcca gaatagtgat aagagaatac cgacttaata tatgtacagt 49740
aggccggggc cagtgggtca tgcctgcaat cccagcactt tggggagccc agatgggtgg 49800
atcacttgag gtcaggagtt caagaccaac ctgactaaca tggggaaact ccatctgtac 49860
taaaaataca aaaattagcc tggcgtgggt gcgagcacct gtgatcgag ctactagcgg 49920
ggctggggca ggagaattgc ttgaacttgg gatgtggagg ttgcagtgag ccgagattgc 49980
accattgtac tccagcctgg                                     50000

```

<210> 8

<211> 50000

<212> DNA

<213> Homo sapiens

<220>

<223> human DYXC1 chromosomal gene region, nucleotides
100001-150000

<400> 8

```

gcaacagagt gagactttga atcaaaaaaa aaaaaaaaaa aaagcgggtct ttttggtggt 60
gttggttggt ttagagatgg agtttttgct cttggtgccc aggctggagt gcagtgggca 120
caatctcagt tcaactgcaac ctctcctcc cagggttcaaa caattctcct gcctcagcct 180
ccctagtagc tgggattaca ggcattgcgc agcatgtctg gctaattttt tatattttta 240
gtagagatgg ggtttcacca tgttggtcag gctgggtctca aactcctgac ctcaggcgat 300
ccaccctgct cggcctccca atgtgctggg attataggca tgagccaccg taccagcca 360
agaactgcat ttttttactg cgaggctgaa ttgatgcac tttgatttga aaaattgtag 420
aaataagaag atccttaaga cataatgaca agccgggcgt ggtgggtcac gcctgtaatt 480
ctagcacttt gggaggccga ggtgggtgga tcacctgagg tcaggagttt gagaccagcc 540
tggccaacat ggtgaaaccc catcgctatt aaaaatacaa aaattagtcc agtgtggtgg 600
caggcacctg taatcccagc tactcgggag gctgaggcag gagaatcact tgaacccggg 660
ggtcagaggt tgcaatgagc caagattgca ccatttccact ccagcctggg tgaagagtg 720
aaactctgtc tcaaaaaaaa aaataaaaaa taaaagacat aatgacaata taaataatta 780
tttcatatta ttaacaagg tattttctat atttgtaaca tttctataat tatacagtt 840
taataataat aataattatt attattttgt gggatggagt ctgctctgt cccctaggct 900
ggagtgcagt ggcgcagctc ccgctcactg caagctccac ctctgggtt catgccattc 960
tcttgectca gcctcccag tagctgggac tacagggtgcc caccgccacg cccagctaat 1020
tttggtgagt ttttaataga gatgggggtt caccatatta gccaggatgg tctcaatctc 1080
ctgaacttgt gatccacca cctcggcctc ccaaagtgtc gggattacag gtgtgagcca 1140
ctgcgcccgg cccatagaat tatttttgaa ttgtgtttat acacacacac acacacacac 1200
acacacacac acacacacac cttttttttt tttttttttg agttgggggt cttgctctgc 1260
tgcccaggct ggagtacagt gggacaatca tggtcactg tagccttgaa ctcttgggct 1320
caagtgaact tctgcatatt tttcagtaca gaaaaatgaa aatataaaaag aatttttagat 1380
caatatcctg gatgaacac gatgcaaaaa tcttcaataa aatgctggca aaccgaatgc 1440
agcagcacat caaaaagctt atccaccatg atcaaatggg cttcatccct gggatgcaag 1500
gctgggtcaa catacgcaaa tcagtaaacg taatccagca tataaacaga accaaagata 1560
aaaaccgcat gattatctca ccagatgcag aaaaggcctt tgacaaaatt caacagcact 1620
tcatgctaaa aactctcagt aagctagata ttgatgggaa gtatctcaaa ataataagag 1680
ctatttatga caaaccaca gccaatatca tactgaatgg gcaaaaactg gaagcattct 1740
ctttgaaaac tggcacaaga cagggatgcc ctctctcacc actcctattc aacacagcat 1800
agtgttgga gttctggcca gggcagtcag gcaggagaaa gaaataaaag ggctcccctc 1860
tcccctctcc cctctcccct ctcccctctg cctctcccc tctcccctct gccctctccc 1920
ctctcccctc tgcccctctc cctctcccct ctcccctctc tctttccacg gtctcccctc 1980
gttgctgagg ctggactgta ctgccgtgat ctccgctcgc tgccacctcc ctgectcagg 2040
tctctgctat tctctgctat cggcctgccg actgcttggg attgcaggca cgcaccgcca 2100
tgectgactg gtttttgtat ttttggtgga gatgggggtt tgctctgttg gcccggtgg 2160
tctccagctc ctgacctcca gctcctgatc tgcccgcctc ggcctcccga ggtgctggga 2220
ttgcagatgg agtcttgctc actcaatgct caatgttgcc cagactggag tgcagtggca 2280
tgatctcggc tgcgtacaac ctccacctcc cagccgctg ccttggcctc ccaaagtgtc 2340
aagattacag cctctgcctg gccgccaccc catctaggaa gtgaggaaca tttctgcctg 2400

```

gccgcccac	gtctgggatg	tgaggagtgc	ctctgcccag	ccgcccagtc	tgggatgtga	2460
ggagcacctc	tgcccagaccg	ccaccccac	tgggaagtgg	ggagcgccctc	tgcccggctg	2520
ccccgtctgg	gaagtgagga	gcgcctctgc	ccggccgccc	atcatctggg	atgtgaggag	2580
cgcctctgcc	tggccacccc	gtctgggaag	tgaggagtgc	ctctgcgcag	ccgccccac	2640
tgggaagtga	ggagcacctc	tgcccgtcag	ctgcccac	tgggaagtga	ggagcgccctc	2700
tgcccggctg	ccccgtctgg	gaagtggaga	gcgcctctgc	ccagctgccc	cgtctgggaa	2760
gtggggagcg	cctctgcccc	gcccgcac	atctgggatg	tgaggagcgc	ctctgcctgg	2820
ccgccacccc	gtctgggaag	tggggagcac	ctctgcccag	ccggcccgtc	tgggatgtga	2880
ggagcacctc	tgcccggcca	ccccatcagg	gatgtgagga	gcgcctctgc	ccggccgccc	2940
catctgggat	gtgaggagcg	cctctgcctg	gccaccaccc	tgtctgggat	gtgaggagtg	3000
tctctgcccc	gctgccccgt	ctaggaagtg	aggagcgcc	ctgcccggcc	accccgctctg	3060
ggatgtgagg	agcgctctg	cccggccg	accccatctg	ggaagcagg	tgcgcctctg	3120
ctcgccgccc	ctgtctggaa	ggtgaggagc	gcctctgcct	ggctgccctt	catctgggat	3180
gtgaggagcg	cctctgcccc	gccaccgggt	ctgggaagtg	aggagcacct	ctgcctggcc	3240
accccgctct	ggatgtgagg	agcacctctg	cccagccg	accccatctg	ggaagtgggg	3300
agcgctctg	cccggccg	ccgtctggga	agtgaggagc	gcctctgccc	ggccgccc	3360
catctgggat	gtgaggagtg	cctctgcctg	gccacccg	ctgggaagtg	aggagtgcct	3420
ctgcccagct	gcccccccc	cccgctggg	atgtgaggag	cgcctctgcc	cggccgcccc	3480
gtctaggagg	tgaggagcgc	ctctgcccag	ctgccacccc	ttctgggaag	tggggagcgc	3540
ctctgcccgg	ccaccccg	tgggaggtga	ggagcgccctc	tgcccggctg	ccgcctctgg	3600
gaagtgagga	gcgcctctgc	ctggctgccc	tgtctgggat	gtgaggagcg	cctctgcccc	3660
gccgccaccc	catctgggaa	gcggggagtg	cctctgcccc	gccacccg	ctgggaggtg	3720
aggagcgcc	ctgcccggcc	accccgctctg	ggatgtgagg	agcgctctg	cccggccg	3780
ccgtctggga	ggtgaggagc	gcctctgctc	ggccgccccg	tctgggaggt	gaggagcacc	3840
tctgcctggc	tgccgcatct	gggaagtgag	gagcgccctc	gcccggctgc	cccgctctggg	3900
atgtgaggag	cgcctctg	cggccgccac	cccattctggg	aagcggggag	cgcctctg	3960
cggccacccc	gtctgggaag	tggggagcgc	ctcttcccgg	ccgcccgtc	tgggaggtga	4020
ggagtgcctc	tgccgtgg	ccttcgtttg	ggaggtgagg	agcgctctg	cctggccacc	4080
ccgtctggga	ggtgaggagt	gcctctgcct	ggccgcccc	tctgggaggc	gaggagcgc	4140
tctgcctggc	cgccccatct	gggaggtgta	cccaacagct	ccgaagagac	agcgaccac	4200
gagaacgggc	catgatgacg	atggcggttt	tgtggaaaag	aaaatgggga	aatttgggga	4260
aaagaaagag	agatcagatt	gttactgtgt	ctgtgtagaa	agaagtagac	ataggagact	4320
ccattttgtt	ctgtactaag	aaaaattctt	ctgcatggga	tgctgtta	ctataacctt	4380
accccccaac	ccgtgcactc	tgaacatgt	gctgtgtcaa	ctcagggtta	aatggattaa	4440
ggcggtgca	agatgtgctt	tgtaaaccag	acgcttgaag	gcagcatgct	cgttaagagt	4500
catcaccact	ccctaattctc	aagtaccag	ggacacaaac	actgtggaag	gctgcaggga	4560
cctctgccta	ggaaaaccag	agacctttgt	tcatgtgttt	atctgctgtc	cttctctcca	4620
ctattatcct	atgacctctg	cacatcccc	tctctgagaa	acaccaaga	atgatcaata	4680
aatactaaaa	aaaaaaaaaa	aaaaaaagg	tattcaatta	ggaaaagagg	aagtcaaatt	4740
gtccctgttt	gcagatgaca	tgattgtata	tttagaaaac	cccatcgtct	cagcccaaaa	4800
tctccttaag	ctgataagca	acttcagcaa	agtctcagga	tacaaaatca	atgtgcagaa	4860
atcacaagca	ttcttatata	ccaataacag	acaaacagag	agccgaatca	tgagtgaact	4920
cccattcaca	attgcttcaa	agagaaaaaa	atacgtagga	atccaactta	caaggtagt	4980
gaaggacctc	ttcaaggaga	actacaacc	actgctcaac	aaaataaaaag	aggacacaaa	5040
caaatgggaag	aacattccaa	gctcatggat	agaaagaatc	aatatcgtaa	aaatggccgt	5100
gctgcccgaag	gtaatttata	gattcaatgc	catccccac	aagctaccag	tgactttccc	5160
caaagaattg	gaaaacaaac	tacttttaag	ttcatatgga	acaaaaaaag	aaccacatt	5220
gccaagacaa	tcctaagcca	aaagaacaaa	gctggaggca	tcatgccacc	tgacttcaaa	5280
ctacactaca	aggctacagt	aaccaaaaca	gcatgggtact	gatactgaaa	cagagatata	5340
gaccaatgga	acagaacaga	gcctcagaa	ataataccac	acatctacaa	ccatctgatc	5400
tttgacaaac	ctgacaaaaa	caagaaatgg	ggaaaaggatt	ccctatttaa	taaatggtac	5460
tgggaaaact	ggctagccat	atgtagaaag	ctgaaactgg	atcccttcct	tacaccttat	5520
acaaaaatta	attcaagatg	gatgaaagac	ttaaatgtta	gacctaataac	cataaaaaac	5580
ctagaagaaa	acctagacaa	taccattcag	gacataggca	tgggcaagga	cttcatgtct	5640
aaaacaccaa	aagcaatggc	aacaaaagcc	aaaattgaca	aatgggatct	aattaaacta	5700
aagagcctct	gcacagcaaa	agaaactacc	atcagagtga	acaggcaacc	tacagaatgg	5760
gagaaaattt	ttgcaatcta	ctcatctgac	gaagggtctaa	tatccagaat	ctacaaagaa	5820
ctcaaacaaa	cttacaagaa	aaaaacaacc	ccatcgaaac	atgggtgaag	gatatgaaca	5880
gacacttctc	aaaagaagac	atztatgcag	ccaacagata	catgaaaaaa	tgctcatcat	5940
cactggccat	cagagaaatg	caaatcaaaa	ccacaatgag	ataccatctc	acaccagcta	6000
gaatggcgat	cattaaaaag	tcaggaaaca	acaggtgctg	gagaggatgt	ggagaaatag	6060

gaataactttt	acactgttgg	tgggactgta	aactagttca	accattgtgg	aagacagtgt	6120
ggcgattcct	caaggatcta	gacctagaaa	taccatttga	cccagccatc	ccattactgg	6180
gtatataccc	aaagattatc	aatcatgctg	ctataaagac	acatgcacat	gtatgtttat	6240
tgcagcacta	ttcacaatag	caaagacttg	gaaccaaccc	aaatgtccat	caatgataga	6300
ctggattaag	aaaatgtggc	agtaatgtgt	gccatccagg	gctagagcaa	gtgcggcccc	6360
acggcctgca	cggccctgag	ccatgctgag	gagctgcgcc	aggcgcctcc	gcacgctggg	6420
ggccctttgc	cagccgccac	cggtaggcag	gcgcctgccg	ggtagtggagc	cgcaacccgc	6480
gctgaggtca	ttttcttctg	aggaagtcac	tcttaaggac	tattctgtcc	ccaaccccag	6540
ctggaacaag	gacctaaagc	tgctctttga	ccagtttatg	aagaaatgtg	aagacggctc	6600
ctggaacagt	ttgccttcac	ataaacgtac	acctactgaa	aggattcaag	actttaaaac	6660
ccattttctt	gacccaaagc	ttatgaaaga	agaacaagtg	tcacaggccc	agctcttcac	6720
cagaagcttt	gatgatggcc	tgggctttga	atacgtgatg	ttctacaatg	acgttgagaa	6780
aaggatggtt	tgcttatttc	aaggagtccc	ttacctagaa	ggaccacctg	gattgattca	6840
tggaggtgcc	attgcaacca	tgattgatgc	tactgttggt	atgtgtgcaa	tgatggctgg	6900
gggaatcgtc	atgactgcca	atctcaacat	cagttgtaaa	agacctatcc	ctctttgttc	6960
tggtgttagg	ataaatagcc	aacttgataa	agttgaagga	aagaaatttt	ttgtttccag	7020
taatgttcag	agtgttgatg	agaagaccct	atattcagag	gcgacaagct	tacttataaa	7080
gctgaatcct	gctaaaagtc	tgacataaag	agctgctggg	gaactccatc	tcattctctc	7140
ccctccagaa	gaagcagttg	tccccgaat	actctgtccc	ctcactgctg	aatccctgta	7200
gggagaagcc	tgccaagagt	gaccttccga	aacagccttc	tgaatacaag	gaggattcag	7260
tttccatctt	cccaactttt	taacacagaa	acacttccctg	cgagcatttc	gacaactctc	7320
agtcagggcg	ctgtggctca	cgctataat	cccagcactt	taggaggcca	aggcgggtgg	7380
attgcctgag	ctcaggagtt	caagatcagt	ctggacaaca	cgatgaaacc	ccgtctctac	7440
taaaataaaa	aaaattagcc	gggcatgggt	gcgtgtgcct	gtagtcccag	ctactcagga	7500
ggctgaggca	ggagaattgc	ttgaacccgg	gaagcggagg	ttgcagtggg	ccaagatcat	7560
gccacatcac	tccagccttg	gcaacagaac	gagaacccat	ctcaaaaaca	aacaaaacaa	7620
aaaaaactct	gtctccttag	gatgtgttac	ctgctccact	gcggactgga	gaaataaatg	7680
tgtattgaaa	ctttctctgc	aaacttgaaa	atgctagaaa	accaagcatg	aagaataaat	7740
acatggcagg	gaagacacag	acatgtgcac	atgcatatac	attataagtt	agtaagttag	7800
aaagctagct	ttgttgtatc	tgaacacatg	aatctttttg	gtcagagtag	gaagcacagc	7860
caaattctat	aggaatgaat	acctcaaate	tgttgtctgg	gattctagag	attaaaccac	7920
tgtgccattt	aaaaaagaaa	aaagaaaatg	tggcacatag	acaccatgga	atactatgca	7980
gccataaaaa	aggatgagtt	catgtccttt	gtagggacat	ggatgaagct	ggaaaccatc	8040
attctcagca	aactattgca	aggacaaaaa	accaaacacc	acatgttctc	actcataggt	8100
gggaattgaa	caatgagaac	acttgacac	aggaagggga	acatcacaca	ccggggcctg	8160
ttgtgggggt	gtgggagggg	ggagggatag	cttaaggaga	tacacctaata	gtaaatgacg	8220
agttaatggg	tgcagcacac	caacatggca	catgtataca	tatgtaacaa	acctgcatgt	8280
tttgcacatg	tacctagaaa	cttaaagtat	agtaaaaaaa	aagaaaaatg	aaaatattat	8340
aaccagaaaa	gataaaataa	taatcacatg	ggctgggcat	ggtggctcac	gcctgtaatc	8400
ccagcacttt	gggaggccga	ggtgggcaga	tcacaaggtc	gggagttcga	gaccagcctg	8460
gccaatatgg	tgaacccccg	tctctactaa	aaatacaaaa	actggccggg	catggtggca	8520
cacgcctgta	atcctagctg	ttcaggaggc	tgaggcagga	gaattgcttg	aaccagaaag	8580
gcggaggttg	cggtgagctg	agatcatgca	actgcactcc	agcctggggg	acagagtggc	8640
actgtctcag	aaaaaaaaaa	attaataata	tcatatgaac	tcccagaaaag	caagaaattt	8700
ggctagaaat	tttatctatt	gtatttccac	cagctattga	ggtttaaaaa	aaagtttaag	8760
gacgggcacg	gtggctcaag	cctgtaaccc	cagcactttg	ggaggccaag	gtgggtgaat	8820
cacaaggtca	ggagtttgag	accagcctgg	cccatatggg	gaaaccccat	ctctactaaa	8880
aatacaaaaa	attagctggg	catggtggcg	tgtgcctgta	gtcccagcta	tttgggaggc	8940
tgaggcagaa	gaatcgcttg	aaccagggag	gcagagggta	cagtgaaccg	agatttgtgt	9000
actgtactcc	agcctgggca	gctgagtggg	actctgtctc	aaaaagaaaa	aaagtttaaat	9060
aatgtataaa	tatggccagg	tgacgtggcc	caacgcctgt	aatcccagca	ctttgggagg	9120
ccgaggtggg	cagatcacaa	ggtcaggaga	tcgagaccag	ggtgaaacct	cgtctctact	9180
aaaaatacaa	aaaattagct	gggtgtgggt	gtgggtgcct	gtagtcccag	ctacttggga	9240
ggctgaggca	ggagaatggg	gtgaacctgg	gaggcagagc	ttgcagtggg	ccgagatcgc	9300
accactgcac	tccagcctga	gtgacagagc	aagactccgt	ctcaaaaaata	tatatatata	9360
aatattgcaa	gattaaaatc	accatcattg	gccaggcggt	gtggctcacg	cctataatcc	9420
cagcactttg	ggattccgag	gtgggtggat	cacgaggtca	tgtgttcaat	accagcctgg	9480
ccaaaatagt	gaaacctgtg	ctctactaaa	aatacaaaaa	ttagccaggc	atggtggcac	9540
acgcctgtaa	tcccacctac	tcgggaggct	gaggcaggag	aatcacttga	acctgggagg	9600
tggaggttac	agtgagctga	gattgtccca	cttgcaactcc	agcctgggtg	acagagcaag	9660
ataaaaaaaa	aaaattacca	ccatcaagta	gtacgttaat	ctgctctggc	tgctataaac	9720

aaaataccat	agactgggtg	gcttaaacaa	taaacagtca	tttcttatag	ttctggaggc	9780
tgggaaatcc	aagatcaggg	tgccagcatg	attcttggtg	ggggtgctca	tcataacttg	9840
cggacaccca	ctttctcact	gtgtccacat	gggggagctc	tgatctcttt	ctcttcttaa	9900
aaggataaac	tcgttttggg	agctctcctc	tcatgacctc	aacctcatta	cctctcagag	9960
gccccactac	caaataccga	ttcacattga	tgggttatgg	ttcagtatat	caatttggag	10020
gagaggtgga	gaagacacaa	acactcagtg	catagcaa	aatatttcaa	tccactggag	10080
gaagatggaa	aatctaaaag	gaaatgttaa	ttaaaaaaag	acctttttat	tcttcataag	10140
acttctttct	cattctagtg	gctacacaaa	caagctgagg	cacgaagagc	aatgaatact	10200
gacatagctg	aactttgcga	tttaaaaaga	gaagaaaaga	accagaatg	gttgaaggat	10260
aaaggaaagt	aagttgtttg	aactctgatc	atgagcttta	tcagtgtatg	agacattagc	10320
agttatcata	ggacgagtat	ggtggctcat	gcctgtaatc	ccagcccttt	gggaggccga	10380
ggtgggatga	taacttgaag	ccagaagt	gagaccaacc	tgggcaacaa	agcgagattt	10440
tgtctctaca	aaaaaacaaa	caaaataaaa	cattagcctg	gtgtggtggt	gagcacctgt	10500
agtcccagct	actcagaagg	ctgcggcggg	aggatcccc	aagcccagga	gttcatggct	10560
gcagtgagct	atgattgtgc	cactgcactc	cagtctgggc	aacaagagt	agaccctgtc	10620
tttgaacaaa	caaagtagtt	atcacattct	ctagatattt	tgtctgtttg	tgtgttgttg	10680
gagaaagata	atgcaaataa	gcaaataagg	tagacagggc	atccatattt	taaaagtcag	10740
ataacaaggc	aatgaggctc	taattttatt	tttttattta	aatgtcataa	aaatgaaaaa	10800
aattacattc	tttgggaatg	ttattaaaa	tcctttttaa	atccgtttta	catttgacat	10860
aagtcctttc	tgatgtctcc	cataaaaacg	ggctttttgc	aaagctacag	ctgttttgat	10920
tattcttata	catttttttt	cttttttttt	tttgtgagat	agtgtctcat	tttatcacc	10980
aggctggagt	gtagtgggtc	aatctcagct	cactgcaacc	tctaccgc	aggttcaagc	11040
agttcttctg	cctcagcctc	tcaagtagct	gggattacag	gcattccacc	ccacacctgg	11100
cgaatttttt	ttgtattttt	agtagagacg	gggtttcacc	atgttgggtc	agctgggtct	11160
gaactcctga	cctctagtga	ttcatccacc	tcagtctccc	aaagtgtctg	gattacaggc	11220
atgagccctg	gtgtggggacc	tattcaaate	cattttctaaa	gattaccatc	ttactgcctt	11280
ccaggtcagt	gatgtaaaca	caaaaaagat	taccatatta	tcccagaaat	tatcttatat	11340
ctgggcagtc	attttattca	tttgtatatg	gatttttttt	ttttttttga	gacaaagtct	11400
cgctcttggg	ccccaggctg	gcgtgtgatg	gcacaatctt	ggctcaatgc	aaactccacc	11460
tcccaggttc	aagcgattct	cctgcctcag	cctcctcagt	agctgggatt	acaggcgctt	11520
gccaccacgc	ccaactaatt	tttgtttcac	catgttggcc	aggctgggtc	caaactcctg	11580
acctcaggtg	atccgcgcac	cttgacctcc	caaagtgtcg	ggattacggg	tgtgagccac	11640
tgcacccggc	cgtgaatatt	ttaacatact	gatcaaaaac	agtgaattct	ggcatattct	11700
gagtggcaat	ttgtgttcat	attttgaggc	ggctatagat	attattttatt	gtattttcatc	11760
atatacactt	ctgtgtttat	tttcttatta	cttattactt	ctataacaaa	ctaccacca	11820
gtggcttaaa	acaacacaaa	tttattatct	tacagtctcg	taattcagaa	gtccaaaatg	11880
agtttctctg	ggccaaaatt	agggtgtcaac	tgcttctcct	ttgaaggctc	taggagaaaa	11940
gctgttttct	taaatttccg	gcttctaagc	tgtttgcatt	ccttgaattg	tggctcccca	12000
gccactgatt	gcgttattct	gacctctgct	tcctgtatct	ccttttctga	ctctcctgcc	12060
tccttctacc	ttttataagg	cctcttgtgt	ttatgtaagt	cccacctaca	tcattccagg	12120
tactctctcc	atcaaactct	ttaaacttatt	cacatgtgca	aagtcctttt	tgccgtgtta	12180
ggtaacgttc	atagggttctg	ggattagaat	atggacatct	ttttttgggg	ggcggggggc	12240
attatctgtc	taccacaata	tctatatttt	tcctttcttt	ctactttttc	ttgggtctttt	12300
ctcttgtctg	ttacaacacc	agggattgtt	ttgtggcggt	tagctggagt	tggcaatttt	12360
tctgaagggt	agaagcctgg	aactgacagg	ttggttcttc	taactcccaa	gagtaaaacc	12420
atatataate	tttctctctc	tttctcttct	tcctttcttc	cttctctattc	atattattcag	12480
ccattaaata	agcaattatt	gattgcttgc	tatttgccag	actataggca	cttaacaaca	12540
gaaatcagga	ggagagagac	gtacacaaat	atttaaaaca	ctgtgtggga	agtacaataa	12600
catggataag	aacaaggtaa	tagagccagg	tgcgggtggc	cacgcctgta	atcccagcac	12660
tttggggagg	tgaggcgggc	ggatcacctg	agggtgggag	ttcaccagac	tgaacagcaa	12720
ggagaaaccc	tgtctttact	aaaagtacaa	aattagctgg	gtgtggtggc	gcatacctgt	12780
aatcccagct	actcgggagg	ctgaggcagg	agaattgctt	gaacctggga	ggtggagggt	12840
gcgggtgaat	gagatcgtgc	cactgcactc	cagcctgggc	gacagagtga	gactccatct	12900
caagataaaa	agaaaatttc	tggccaggca	cagtggctca	cgctgtaat	cccagcactt	12960
tgagaggcca	agatgggtag	atacttgagt	tcaggttttt	gagacaagcc	tggccaatat	13020
ggtgaaaccc	aatttctact	aaaaatgtaa	aaattggctg	ggcacgggtg	ctcactccta	13080
taatcccagc	actctgggag	gccaaagggtg	gtggattacc	tgaggccagg	agtttgagac	13140
cagcctggcc	atcatggtga	aaccctgtct	ctactaaaaa	tacaaaaact	agtcaggcat	13200
tgtggcgcac	acctgtaatc	ccagctaate	tgagtctcag	aggcatgaga	atcacttaaa	13260
cctgggaggt	agagggtgca	gtgagctgag	atggcaccac	tgaactccat	tctgggcaat	13320
ttagcaagac	tgctcaaaaa	aataataata	attaaaaaaa	taataataat	gggcaaaaga	13380

cttaaatagg	cattttctcca	agaagagaga	caaattggcta	gtaaatataa	aaagatgttt	13440
aacatcacta	accattttggg	aaatgtctta	tcaaaaccac	tatgagatgc	cacttcacac	13500
ccattaggat	ggctactcag	aaaaaaaaa	gaaaataaca	agtgttagtg	aggatgtgga	13560
gaaattagaa	tctgtgcac	tggttgtaga	gggtgtgaat	gatccagctg	ctatggaaaa	13620
cactattgtg	gttcccaaaa	aagtaaaaat	agggccgggc	gcaatggctc	acgcctgtaa	13680
tcccagcgct	ttggggaggcc	gaagcgggca	gatcacctga	gatcgggagt	tcgagaccag	13740
tctgaccaac	atgggagaaac	cccatctcta	gtaaaaatac	aaaattagcc	aggcgtgggtg	13800
gtacatgcct	gtaatccag	ctactcagga	ggctgacgca	ggagaatcgt	ttgaacctgg	13860
gaggcagagg	ttgcgggtgag	ccaagatcgc	accatttgcac	tccagcctgg	gcaacaagag	13920
tgaactctg	tctcaaaaaa	caaacaaaac	aaaaaaagca	aagactttgc	atthttgaaga	13980
aatcctttta	tctgtgacat	ctctttatth	gaagagaatt	ttggaacatt	taaactgaaa	14040
gagtatatcc	attgcaagta	acaaaaaac	ccaatttttt	tatattgaaa	ggaattttatt	14100
gtcttatata	actaaacagc	taaagggtgt	ttctattttca	agtaaagctt	gatccagcag	14160
cttaactgta	tcatgaagg	ctcggtttct	ttctgccttt	ttattccttt	catattttcca	14220
tagtatcagc	tttattctaa	tgccagctct	tcccacggtc	ttaaaaacgg	tcagcaacaa	14280
tgtgggctat	gtgacttctt	cacttatatc	cagcaggggg	agaaatttgc	ccaacttttc	14340
attcttcaac	tttgaaacca	acccacaggc	ttcatcctaa	gtagaacaat	ataggtcaca	14400
ctagcccatc	cctgagtcac	ttactggagc	aaaaataatg	caaataatgcc	ctactggctt	14460
aaattactaa	tgtctaccct	tgagggtggg	agtgagggtc	attccattca	aatgacaggc	14520
tggtatagt	gaaaagagat	ggattcagtg	caggcaacgt	ttaccctaaa	gagaatgcaa	14580
aaagaggtaa	gccatcctct	ttgtcaaata	caattagata	ttattttctgt	gtttctgttt	14640
caatgttaaa	ttgtttttct	tctctgtttt	tgtctcatta	gcaaattgtt	tgcaacggaa	14700
aactatttgg	cagctatcaa	tgcatataat	ttagccataa	gactaaataa	taagatgcca	14760
ctattgtatt	tgaaccgggc	tgcttgccac	ctaaaactaa	aaaacttaca	caaggctatt	14820
gaagattctt	ctaagggtatg	gatattctatg	tatgatataat	ggtgctttta	atatatcctt	14880
ctattaattg	gtttaaatga	tgatcttttt	ctgttcagtt	gaaataattg	agatgcaaag	14940
atthttaaaga	ttgtctttct	tattgaatct	tttttttttt	aactgatttt	ttactaatgg	15000
acaaggaact	gggtgttttt	tgtgacttct	atgaatagtt	agtttagatta	aaaatcagct	15060
gttactggcc	gggcgagtg	ggtctcgcta	tattgcacag	gcagggtctcg	aactcctggg	15120
ctcaagctat	cctcccgct	ctgctccct	gagagctggg	attacagaca	tgagccaccg	15180
cgcccgccac	ccagcccgaga	tatctctaca	atcattttct	catttgcagg	gtaacttagt	15240
atattctact	ttccattact	aatattttact	gtgtatgtct	tgaacttcta	cagctttttc	15300
ttttttccat	gtcaagataa	cttgttttta	gggcatatca	tgtgcaaaat	ctcttaggta	15360
gcttcttgag	attgaggata	tggaggacac	aaccaagtct	tcatcacttt	gatatcatac	15420
tacttttatg	atccagtttt	tctttgactc	tcacaatgca	aacaaatatt	tgttgaaatga	15480
atgaataaag	tgaatcaccc	aatctgaata	caaaagccca	caaatagtat	ttataaatct	15540
ctactggtaa	aaataaagct	gtggagatgt	gaaatgataa	gctgaataat	aaccttggag	15600
gggtatgaat	cccatatagg	aacaactgaa	aaattcctta	agttgttcaa	catatctctt	15660
ctggaaaacc	tgataataat	tatttgtttt	atatatatat	ataatatata	ttatatataa	15720
gaatatatat	aatatatata	atattatata	tatttatatat	aatataatat	atataattat	15780
tatatatat	atattatata	tattttatat	aatataatat	atataattat	atataatat	15840
tataatatat	atataatat	tgtaatatat	ataatatata	ttataatat	tataatatat	15900
aatatatgta	atatatatata	tatatattat	atatataaaa	caaatatata	tatttgtttt	15960
ataaaaaaaa	ttatatatat	ttatatataa	aaaacaaata	attatatata	tatttgtttt	16020
atatatatata	tatatattata	tttgctaaat	tccgtgtacca	gctaagctaa	aaatttaggt	16080
gagtgcattga	ggccattttt	tttttttttt	ttttgagacg	aggtcttgct	ctgttgccca	16140
ggctggagta	caggggcaca	atttcggctc	actgcaagct	ccgcctcccc	ggttcacgcc	16200
attctcctgc	ctcagcgtcc	ggagtagctg	ggactgaagg	cgcccgccat	cataccgggc	16260
taattttttg	tatttttagt	agagacgggg	tttcacgctg	ttagccagga	tggtctcgat	16320
ctcctgactt	cgtaatccgc	ccgcctgggc	ctccgcccgc	ctgggcctcc	caaagtgtctg	16380
ggattacagg	catgagccac	cacaccgggc	cgaggccttt	tgtgtgtgtg	tgtgtttgtg	16440
tgagacaaaag	tctcactctg	tcaccaggct	ggagtgcagt	ggtgcgttct	tggttatttg	16500
caacccttgc	ctcccggtat	caagtgtatc	tctgcctca	gcctcctgag	tagctgggat	16560
tacaggtgac	cgctaccaca	tctggctagt	ttagtagatt	ttagtagaga	cagggttttg	16620
ccatgttggc	caggctggcc	tcaagctcct	gactttgggt	gatctgccc	cctcagcctc	16680
cgaaagtgtc	ggaattacag	gcgtgagcca	ccaggcccac	ccgaggctta	ttttaaaatt	16740
agaattttta	ccatgttttt	gcttgtttgt	ttttgttttt	tgtttttttt	gagacggatt	16800
ctcgtctctg	caccaggtct	ggagttcagt	ggcgcgatct	cggtctctctg	caagctctgc	16860
ctccctgggt	caagcaattc	tcccgcctca	gcctcccaag	tagctaggac	tacaggtgtg	16920
caccaccaca	gccagataat	ttttgtattt	tttttagtta	gagacggggt	ttcgccatgt	16980
tggccaggct	ggtctcaaaa	tcttgacttc	aggtgatcca	cctacctcgg	cctccccaag	17040

tggtgggatt	acaggcgtga	gccaccatgc	ccagcctttt	gcttgtttaa	attaagaaac	17100
tataactttc	ttgtaataat	tatatatatt	ttgtaaggca	ctggaattat	tgatgccacc	17160
tggtacagac	aatgctaata	caagaatgaa	ggcacatgta	cgacgtggaa	cagcattctg	17220
tcaactagaa	ttgtatgtag	aaggtaagga	attgatagaa	atgggttaag	tcccaagtta	17280
tactctgaaa	aaaatgtcat	tggaattatt	taagatcgta	acttttaagg	actccatttt	17340
taaatatttt	tagcatttaa	tttattctta	gtaatgtctg	cagtatatct	gacaatacat	17400
gattttctaaa	ttatatattaa	aaaattcatt	gtagaagaga	attaaaataa	gtgtaaacia	17460
caagtttcag	tctagaaaaa	tgctatatta	gctgggtgca	gatgctcatg	cctgtaatcc	17520
cagcactttg	ggaggcagag	gcgggtggat	cacctgaggt	cgaggagtctg	agaccagcct	17580
gaccaacatg	gagaaaccct	ctactaaaaa	cacaaaatta	gcttggcgta	gtggcacatg	17640
cctgtaatcc	cagctacttg	ggaggctaag	gcaggagaat	cccttgaacc	cgaggaggcg	17700
agattgtggg	gagccgagat	catgtcattg	cactccagcc	tgggcaacia	cagcgaaact	17760
ccttctcaaa	aaaaaaaaaa	atgctatatt	accagacaac	tcttcataga	aacgtgtgat	17820
aatgctggg	tggtgtgctt	cacgcctata	atcccaggaa	ctggggaggc	tgagggtggaa	17880
ggatggcctt	aggccaggag	tttgagacca	gcttgggcaa	catagtgaga	ccctgtctct	17940
taaaaaaaaa	aaatacatga	taggctgggt	gtggtggctt	atgctgttaa	tctcagcact	18000
ttgggaggcc	gaagcagggt	gatcacaagg	tcaggagatc	aagaccatcc	gggctaacac	18060
ggtgaaaccc	cgtctctact	aaaaatacaa	aaacaaaatt	agccagggtg	ggtggcgggc	18120
gcctgtagtc	ccagctactc	aggagactga	ggccagagaa	tgccgtgaac	ccggaaggca	18180
gagcttgcag	tgagccaaga	tcacgccact	gcgctacagc	ctgggtgaca	gagcaagact	18240
ctgtctccaa	aaaaaaaaaa	aaaaagataa	aatatataaa	tgatttgaga	tatcatggat	18300
atztatctca	gagagcttct	tcggctcatcc	ctgtatgtat	gtatgtattt	gtgtgtgtgt	18360
gtgtgtgtgt	gtgtgtgtgt	atacacacac	ctaagctcgg	aaataactga	tccaccatag	18420
tgcattgcaca	ttgcttatat	ttgttagatt	gtattaagtt	ctgtaattta	gctctatgta	18480
tacagaaaat	atagcattta	ttttatttta	tttttagatag	atttaggggc	cgggcacggg	18540
ggctcacacc	tgtaatccca	gcactttggg	aggccaaggt	gggtggatca	tgagggtcagg	18600
agatcgaggc	cctactggct	aacacgggtg	aacccccatc	ctactaaaaa	tacaaaaaat	18660
tagccagggt	tggtggcagg	tgccctgtag	cccagctact	caggaggctg	aggcagaaga	18720
atggtgtgaa	cccaggaggc	agagcttgca	gtgagccgag	atcatgccac	tgactccccg	18780
cctgggcaac	agaaggagac	tctgtctcaa	aaaaaaaaaa	tggaatcta	atttaaaact	18840
tggtacttgt	tctgaaccat	gctactagt	attattttta	ttttaaacaa	ctattgtcta	18900
gataaaaagaa	gtgctaataa	aatattttat	gtattaatca	tcattgctat	ataaacacag	18960
gcctacagga	ttatgaagcg	gcacttaaga	ttgatccatc	caacaaaatt	gtacaaattg	19020
atgctgagaa	gattcggaat	gtaattcaag	gaacagaact	aaaatcttaa	tgactattag	19080
aagtaactaa	gtattgttat	aagtttttta	aaaacaactg	gaggcatctt	tgtacatatt	19140
atggccagtt	gtacagaatc	gctttctgtt	tagtacttta	gttctgttga	gggcaaaaata	19200
ttataaatct	atagaaaata	aactgtttga	cttgaatcat	ttctgaataa	gtaaatctaa	19260
ataagaatct	attttaattc	cttatttctt	catattaata	catatgtata	ctttttttgtg	19320
ttactgaatt	aagcttgccc	ttgtaacaaa	atatgttttg	gtatagttac	caggacactt	19380
actgattaat	ttttaacaag	gtagaatttt	aaaataaaaag	atttataaat	aactttttgtt	19440
tgtattaata	taccatttaa	ttgactgaat	gggtgacttt	ggtataataa	atattgacag	19500
gttgctcggt	agtttccaac	tgacacagaac	cttatttttt	tgtttaatac	ttctctaattg	19560
cttggtgttc	aagatttagac	cagttcagcc	tagtataaaa	caactgttta	gaaaacctta	19620
tattcaactt	catttatagg	ctgtgcacct	gaaaactgat	catatttcat	aacactatct	19680
ggtgaagata	aattttttgag	tgaaatagtt	ttctagtacc	tccaagtaga	caagggggag	19740
aaaagacagc	aaagtgtgaag	atattaacct	ggaatattat	ggtattggta	ttggactgca	19800
ccatcatttg	tgttgtatca	ctgggattat	gcaagtgtta	agcacaatag	cacagcttcc	19860
cttttgcttg	tagttactgt	aattctctaa	ttaaattttt	aagggttttt	tttttttttg	19920
agacggagga	agtctccctt	tgttgcccag	gctggagtgc	aatggcgcg	tcttggtcca	19980
ctgcaagctc	tgctctctgg	gttcaggcca	ttctcctgcc	ttagcctccc	gagtagatgg	20040
gactacaggc	gcctgccacc	acgcctgact	aatttttttg	atttttagta	gagatggggg	20100
ttcaccatgt	tagccaggat	gggtctcaatc	tcctgatttc	gtgatccacc	caccttggcc	20160
tcccaaagtg	ctggattaca	gggtgtgagcc	accgcgcccc	gccttttttt	ttttttttct	20220
tgagacacag	tttcaactct	gttgcccaga	ctggagagca	gtggcctgat	catagctcgc	20280
tgcatectcc	acctcccagg	tttaagggat	tctcctgcct	caggcctcct	gagtagctga	20340
gattacaggc	accaccacgc	ctgatttaatt	ttttgtattt	ttagtaaaga	cagggtttca	20400
tcattgtggc	cagggttggtc	tcgaactgct	gacctcaggt	gatccaccgc	cctcggcctc	20460
ccaaagtgc	gggattacag	gcatgagcca	ccgcgcccgg	ccttattttat	ttatttttga	20520
gatgtagtct	ggctctgtaa	cccaggcttt	agtgagctgg	tgcaatctcg	gctcactgca	20580
acctcgtct	cctgggttca	agcaattctc	ctgcctcagc	cttccaagta	gctgggatta	20640
cagggtgcgtg	ccaccacatc	tggtctaattt	ttgtattttt	agtagagacg	gggtttttacc	20700

atgttgccca	ggctgggtctc	gaactcctga	cctcaagtgg	tctgcctgcc	tcagcctccc	20760
aaagtgcctgg	gattataggc	aagaccccc	gcgccctggcc	taacaaat	agtttaaagg	20820
tctaattggc	ctttatcagt	gactcatgaa	tcaagcagca	tcttatataa	agatttagaa	20880
gagacactgc	tagaggtggc	agaataaaat	ggcctttgca	aaattatgat	taagacagtg	20940
aaagaggctg	ggcgcagtg	ctcaagcctg	taatcccagc	acttttgggag	gctgaggcag	21000
gcagatcaca	aggtcaggag	atcgagacta	tcctggctaa	catggtgaaa	ccccctctc	21060
cactaaaaat	acaaaaat	agccaggcgt	ggtggcaggc	gcctgtagtc	ccacctactc	21120
gggaggctga	ggcaggagaa	tggcgagaac	tcgggaggcg	gagggtgcag	tgagccgaga	21180
ttgtgccact	gtactccaac	ctgggtgaaa	gagcaagact	ccatctcaaa	aaaaaaaaaa	21240
aaaaaaaaaa	aaaaagaaaa	aaaagacagt	gagagagatt	taacttaact	gaatttatct	21300
tgcttttaac	ctccaagctg	tccttggtca	ttcctgggtg	taggctgaac	taactttaaa	21360
aaacttagtg	tatagtttaa	acaaagacag	tgacagtcc	ttcccaaagc	cgacctcctt	21420
cttgccctggg	gacggaattg	cctttgtagg	actaacatta	gccacaagat	taaaaattat	21480
agtttatgct	gggcatgggtg	gctcatgccc	ataatcccag	cactttggga	cactgaggca	21540
ggtgggtcac	ttgaggtcag	gagttagaga	gcagcctggc	caacatggtg	aaaccctgtg	21600
tctactaaaa	atacaaaaat	tagccgggca	tgggtggcagg	tgcttgtaat	ccctagctac	21660
ttgggaggct	gaggcaggag	aatcacttaa	aactgggagg	tgaaggttgc	agtgagcgga	21720
gattgggcca	ttgcactacg	gcctgggtga	caggagtga	actccatctc	caaaaaaatt	21780
acgggttaga	agtcatactg	ctggaggcca	ggcgcggtg	ctcatgcctg	caatcccagc	21840
actttgggag	gccgaggcgg	gtggatcacc	tgaggtcggg	agttcgagac	cagcctgacc	21900
aacatggaga	caccctgtct	gtactaaaaa	tacaaaatta	gctggacctg	gtggcgcttt	21960
cctgtaatcc	cagctactcg	ggatgctgag	gcaggagaat	cccttgaacc	cgaggaggcg	22020
agggtgcggt	gagctgaggt	ggcgccattg	cactccagcc	tggacaagaa	gagcgaaact	22080
ccatctcaaa	aaaaaaaaaga	agtcatactg	ctggaggcta	caaaaattctg	accctcccta	22140
aactgctcct	aagatcagtg	tttacaatat	tttgagacc	ctgcacttaa	tgaatcagct	22200
ggcaccaccc	agatcaataa	actgactcat	ctaattctgt	ggccccccca	accaggaact	22260
aacttagcac	aagaaaacag	ctccaatctt	taatttctac	tctaaccaat	gagccactcc	22320
tggctcacca	gcttcacctc	accaccaag	ttgtctttaa	aaactctgct	ccctggctgg	22380
gcgcggtggc	tcaagcctgt	aatcccagca	ccttgggagg	cttaggcgag	tggatcacga	22440
ggccaggagt	tcaagaacag	cctggccaag	atggtgaaac	cccgtctcta	ctaaaaaac	22500
aaaaaaatca	gccgggtgtg	gtggcgggca	cctgtaatcc	cagccactcg	ggaggctgag	22560
gcagagaatt	gcttgaaccc	aggaggcgga	ggttgacgtg	agctgagatc	gggccactgc	22620
actccagcct	gggcgacaga	gcgagactgt	ctcaaaaaca	acaaacaaac	aaaaaaaaaac	22680
aaaaaaaactc	tggtcttctg	cacagctggt	tctgtgtgaa	ttactctttc	tctgttgcaa	22740
tttccgtgtc	ttaataaatt	ggctctgtct	aggcagcagg	cagagtaaac	ccctttgggg	22800
gttacaaaaa	caattggtat	ttatagggta	gctgaagcag	gaacaagaaa	cagcataata	22860
caaaaagtgg	gttggttgat	gtaacttcag	atcactttcc	ttgcaagagt	taaaacagtg	22920
aggacttccc	tatcctggca	gctaaaagg	gcctgttttg	gtatttggct	atcttctctc	22980
tcattgattta	tcagaagatc	agataaacaa	ctaaattttg	ggccaggctc	agtggctcat	23040
gcctgtaatt	ccagcacttt	gggaggctga	gatgggcgga	tcacctgagg	tcaggggttc	23100
gagaccagcc	tggccaatcc	cagctccact	aaaaatacaa	aaattagccg	gacatggtgg	23160
caagcacctg	taatcccagc	tactcaggag	tctgaggcag	gacaatgact	gagacagtga	23220
aagagagcta	acctaacaga	ctccatcttg	gttctaacct	ttaagctgtc	cttgttcctt	23280
cctgtgcata	ggctgaacta	actttgggag	gaacttagtt	tatagattat	agttggaaac	23340
aaagatgtta	acaacctttc	tccaaaacct	tttccctcct	gcctggggat	tagactgcct	23400
ttgtaggact	aagaaattag	ccacaagatt	agaaattatg	gtttaggagt	catgccgttg	23460
gaagttacaa	gattctgacc	ctcactaaac	tgctcctaag	atcagtgtct	gagatatttt	23520
gcagaccctg	cacttgctgg	atcagctggc	accacctagc	tcaataaact	ggctcatccc	23580
atcttgtgac	ttccaccag	gaactgactc	agtgtgaag	gacagcttca	attcctattg	23640
atttcatcta	cctaaccaat	cagcactcct	ggctcactgg	cttcccccca	cccaccaagt	23700
tgctcttaaa	aactctgatt	cccaaagtct	tgggcagctc	gatttgatta	gtaataaaac	23760
gctgggtctcc	tgcatagctg	gctctgtgtg	aattactctg	tctctgttgc	agttcccctg	23820
tcttgataaa	ttggctctgt	ctaggcagca	ggcaaggcta	acccattggg	cagttacact	23880
agcgcaagag	gttcagtcga	aatcagtggc	cttccataca	ttttatttaa	cacatcccag	23940
aaagaggttg	tgaattacat	caagcaaaag	ggttctgtcc	tacaccaggt	ttgggatgat	24000
ttttattttc	cacacgttag	ctctttgctg	acagaggtca	aaatattagt	cctaatacag	24060
agatattgtc	taatagttaa	gtgttatata	aacctattct	gtcttggttc	cctagtgtag	24120
aagaaaatca	gagttgaaca	gtaaagtga	aaaaaaaaatg	cttttactca	gtaacttata	24180
ataaggaaaa	agagacctca	gcattggaacg	aggcttagtt	cttttcattc	ctgtgaggcc	24240
tgagaataaa	aaatgaaaaa	gaactaggct	cagttccaaa	tatggcatgg	acaagtaggg	24300
gtttatagcc	aaggagtagg	ttgggtaatg	aagggtgtca	gtggatggaa	aattaccaag	24360

agaaaaacatt	aggggttaga	ggaattctcg	ttaaattgac	ctaacaggat	tcttgctgaa	24420
gacaggccag	gttgatcagt	tatcaccggg	gggatggtag	ggaatgagga	atctgggtcaa	24480
atatcaaggg	tgatcagata	ttgatggtag	ggattctggc	taaaggaact	tggcaggatt	24540
cttgccatga	ctgggctctt	aagagcaaa	tatgtggctg	agcgtgatgg	ctcacgcctg	24600
taatcccagc	actttgggag	gccgaggtgg	gcggtatcaac	tgagggtcagg	agttcaagat	24660
cagcctgacc	aacatggaga	aaccccatct	ctactaacia	tacaaaatta	gccagggtgtg	24720
gtggcacatg	cctgtaatcc	cagctactca	ggaggctgag	gcaggagaat	tgcttgaacc	24780
tgggaggtga	cggttgtggt	gagccgagaa	tgcgccattg	cactccagca	gcctgggcaa	24840
caagagcaaa	actccatctc	caaaaaaaaa	gcaaggtaca	gccgggcacg	gggtctcacg	24900
cctgtattcc	cagcactttg	ggaggctgag	gcagggtgag	gatgaggtca	ggagttggag	24960
accagcctga	ccaacatggt	gaaacccgtg	ctctactaaa	aatacaaaac	ttagctgggc	25020
atggtggcgc	atgcctgtaa	tcccaggtae	tcagggaagct	gaggcaggag	aatcgcttga	25080
acctgggaga	cagaggttgc	agtgaagctga	gatcggtgcca	ctgcactcta	gcctgggataa	25140
agagcaaggt	gcaaggatgg	ggcctagtca	aaaaagtggt	tcacaggagc	ctatctagag	25200
tttgggtcaag	gagagacctc	ttaatcacta	gcaagccaac	tgctttccaa	caaatttcat	25260
ccatgtggga	aataagggca	aaggattttg	cacatgccat	ctagggaaaa	agtaggtgcc	25320
ttacttcatt	ttccactgct	gtatcagaat	accacagact	aggtaattta	taaaggacag	25380
agatttattt	ggttcatggt	tctgcatgct	gggcagtcaa	gattaaggga	ctacatgcac	25440
ctggtgaaga	ccttcttgct	atatgataac	atggcagaat	gtatcacata	gtaagacagc	25500
atgcaagaag	aaaggaaagg	aaaagggggc	tgaactcccc	tcttttataa	ctaaaccacg	25560
tcttgcaata	actaaactac	ttctgtatta	acaactttta	tttattcaag	agtatgggtg	25620
ccccatgacc	taatagtctc	ttttgtgtgt	gtgacagagt	cttgctttgt	caccacaggct	25680
agagtgcagt	agtgtgatgt	aggcttactg	caacctccac	ctcctgggtt	caagtgattc	25740
tcttgccctca	gcctcccaag	tagctgagat	tacaggcatg	cgccaccatg	cccggctaata	25800
tttgggtattt	ttagtagaga	tggtttttca	ccatggtgcc	caggctgggtc	tcaaaactcc	25860
cgacctctgg	cgatttgccc	accttggcct	cccaaaatgc	tgggattaca	ggtgtgagac	25920
actgtgcctg	gcctattttt	gtatttttta	atagagacag	catttcacca	tattggccag	25980
cctgggtctcg	cactccttat	cttaagtgtg	ccaccggcct	tagcctccca	aagtgtgag	26040
attgcagggtg	tgagccaccg	cgctggcttt	actttagctt	ttttagtcca	tattaaggag	26100
taacatgact	ctctagtatt	cttcagctat	ctttacatct	gattgctgta	ggtcagcagt	26160
tctcaaaaatg	tgttctaata	agaatacaaa	tactctgggtc	agcatgggtg	ctcacaccca	26220
taatcccaac	actttgggag	gtgggtgggtt	atgcctataa	tcccagcact	tgggaggagg	26280
tgggaggata	acttgagccc	aggagtccaa	gactaaccta	agcaacatag	cgagaccccc	26340
atctctacaa	aaaatagaaa	aaaagtttagc	caggcatggt	ggtgcatgac	tgtagtccta	26400
gctacttggg	aggctgaggt	tggaaaatcg	cttgagccgg	ggaagtcgag	ggtgaggtta	26460
cagtggagctg	tgcttgtgtc	attgcgctcc	agcctgggtg	acagagggag	accctgactc	26520
aaaaagaata	caaaatatgc	tatattatat	catacttaa	aaaaaaaaaa	acttttggct	26580
ctacatctag	ctattgcccc	atttatctgt	tcagtgtgca	gcaaaactac	ttaaaattag	26640
ttttgagttt	ttctgttctt	tcttattcca	ataaagtttt	cctctctacc	gcttcttctt	26700
gtagagagga	atacatttat	ttattttatt	attttatttt	ttttgagacg	gagttttgct	26760
tgtaacccag	gctggagtgc	aatgtcgtga	tcttggctca	ttgcaaactc	tgccctcctg	26820
gttcaagcga	ttctcctgcc	tcagcctccc	gagtagctgg	gattacaggc	ttccaccatc	26880
acacctggct	aatttttgta	tttttagtag	agatggagtt	tcaccatggt	ggccagggtg	26940
gtctcaaacg	cctgacctca	ggcgatctgc	ccacctcagc	ctcccaaagt	tctgggatta	27000
cagggtgtgag	ccttcgagcc	tggccttggt	gaaataatc	tgtttgaagt	catccatgac	27060
ctctgatattg	cctaatacaa	ggtcagttct	caattcatat	gctatatctc	ccaagataat	27120
ttcacactgc	tgggtcattc	cctctccttg	aaacaagctg	ggcttccagg	cctcacagtc	27180
ttctaatttt	ctctttcttc	agtagtcact	ccttcttggt	ctcatttggt	tcttcttggt	27240
ccttgccctg	acctctaaat	ggtgggtttt	cctaaagcat	agtcctcagg	tctgttttct	27300
acctacactt	tgtagtctta	tctgggttta	tcatttttaa	taacatgttc	caagtgataa	27360
tcttcaattt	gggtactctc	cttgaattca	agttgtatat	tcagttgcct	tacatcaact	27420
tgacttttct	cagatgttct	cttaacctcc	tttagagggt	gtggtcagac	atctccttat	27480
cagaaacctt	ccctttccac	ctacctaaag	taactccttg	ctgaagtact	cactttcctc	27540
ctaactctat	tttatgtttt	ttcccgtaac	acttatcact	tggcatgttc	tatacatcta	27600
gccatatata	tttacatagt	tacctatgta	tgttatcatg	ttatttatgc	atatattcat	27660
gtgtattttt	atttgtaaat	atataaaaat	atgtatttat	acatgctttt	tgggtctgtt	27720
tctcctgctg	ggattcatta	gaatctaaac	tccattagga	ctagcttcta	gtgcctagta	27780
tagtccctggg	acctttatta	ttattattat	tattattatt	attattatta	ttattattat	27840
acattttttt	gagacggagt	ttccctcttg	ttgcccaggc	tggagtgcaa	tgggtgtgata	27900
tcggctcacc	gcaacctccg	cctctggggg	tcaagagatt	cttctgcctc	agactcccaa	27960
gtagctggga	ttacaggcat	gcgccaccat	gccagctaat	tttttttgta	tttttagtgg	28020

agatgggggt	tctccatatt	ggtcaggctg	gtcttgaact	cctgacctta	ggtgatctgc	28080
ctgcctcagc	ctccccgaagt	actgggatta	caggcgtgag	ccaccatgcc	cagccagtc	28140
tgggacttta	ataggcactg	aatgactgtg	tatataatga	aattccagat	gatatgcttg	28200
attttcagct	acttatcctg	ataattttat	tattttttag	atgaagtctc	cctctgtcac	28260
tcaggttgga	gtgcagtggc	atgatctcag	ctcactgcaa	cctccacctc	ccagggttaa	28320
gagattcttg	tgccctcagcc	tctggagtag	ctgggattac	aggcatgcac	caccatgcct	28380
ggctaagcat	tttgatattt	tagtagagat	gtggtctcac	catggtgccc	aggcttgcc	28440
tgaactcctg	gcttcctgta	atcggaccac	ctcggcctct	caaaagtgct	gggattttta	28500
gtgtgagcca	ctgtgcctgg	agtatcctga	gaattttttt	tttttttttt	ttgagatagt	28560
ctcactctgt	tgcccaggct	gcagtgcagt	ggtgtgatct	tggtcactg	caacctctgc	28620
ctcctggggt	caagcgattc	tctgcccga	gctctctaag	tagctgggac	tataggcaca	28680
caccaccacg	cctggcta	tttttgatt	tttagtagag	acgggggttt	gtcatgttg	28740
ctaggctgg	ctcgacctgc	tgacctcaag	tgatctgccc	gtctcggcct	cccaaatgc	28800
tgggattaca	ggtgtaagcc	accgtgccc	gccaatcctg	agaatttagc	aacaacaaaa	28860
atgaccgaac	agtgcaccac	tgccataggt	aggaatttta	ggttagtatc	tagattctac	28920
atataaaaa	gtaaattcac	ttgccatgaa	ttgggcacct	gcagtgaagg	gggaaaatgg	28980
tttgatgg	ttatactgca	agaacaggct	aataaactaa	aatgttattg	cataattcac	29040
ttggacatct	tgtgcagtg	cccactattt	gatgttttga	ggaagtga	aaaattaatt	29100
tttcttcttg	cttgtgccat	tactaaatat	cagttttggg	gggtatttg	gaagaagttg	29160
atagttctgc	agagtttgag	ctgtttcctt	acatcaagca	aattttatga	ttagaagatt	29220
caacttttat	aatccctta	tgactcaca	atattattct	tctaattgat	ggtaatatcc	29280
tgaactgaaa	ccaacagggg	aaaataacaa	tgattttttt	ttttccaga	aagatactca	29340
gacccaatta	tcaacatatg	gtttaaacag	atggcagctg	aaataaatct	gtgtgtagta	29400
gaatcaaaga	ttttaaagaa	ttgtgtagcc	tgtcacctgc	cactgctcac	actgtgttga	29460
agatatataa	aattaattgc	atttataaaa	atataaccaca	ttgtctcaca	tctttgtact	29520
tttatccata	tagtttctc	tccctagaat	agccttcttt	tgatttagct	ttatcttctc	29580
caggacactt	ctcctgatct	ctctggctc	aaattgagca	attctgtgtc	tgtctgaaag	29640
gcttgtgcct	actgcctact	ttacattaca	aaaattatca	catattaatt	tgctaattctc	29700
atctcccaa	aatactttt	tttattctt	ttttttgaga	cagagttttg	ctctgtgtgc	29760
ccaggttgga	gtgcaatggc	gtgatcttgg	ctcactgcaa	cctccacctc	ccagggttcaa	29820
gtgattctcc	tgccctcagcc	tcccaaagta	gctgggatta	caggcacccg	ccgccatgcc	29880
cagctaattt	ttttgtatct	tagttgagat	gggggttcac	cattttggcc	aggccgggtcg	29940
gtcttaaaact	cctgacctca	ggtgatccac	cagccccggg	ctcccaatgt	gctgggatta	30000
cagggtgtgag	ccaccgcacc	cggccaatat	tggttaattaa	aacaaaaatc	actgtctttt	30060
atttctgtat	ctctatttgc	atagtacagt	ctgccatcag	tcggggttca	aaaaaatatt	30120
gctcaatcta	tcaataaatt	acaagttctc	tcttccacca	gcctagcagt	gggaactaac	30180
acaattgttaa	aagtgggaaa	ttggctgggc	agtgtggctc	actcctgtaa	tcccaacact	30240
ttgggaggcc	gaggcaggat	gactgcttga	ggacaggagt	ttgagatcag	cctgggcaac	30300
acagtggagac	tccatctaca	cacacacaca	cacacacacc	ccacaaatta	gctaggggca	30360
tgggtgttgg	tgccctgtagt	cccagctagt	cgagaggctg	aggtggggga	tagtttgagc	30420
ccaggagtcc	aagggtgcag	tgaacatga	tcatgccact	gcattccagc	ttgggtgaga	30480
taagggtgaaa	ccatttctcc	aaaaataaaa	aatataagtg	tgttggctgg	gcacagtgc	30540
tcacacctgt	aatctcagca	ctttgggtgg	cagaggcagg	cggatcacca	ggtcaggaaa	30600
ttgagaccat	cctagctaac	aggggtgaa	cccgctctca	ctaaaaat	aaaaaatatt	30660
ctgggtgtag	tggcgagtgc	ctgtaatccc	agctactcag	gaggctgagg	caggaaaatc	30720
gcttgaacct	gggaggcgga	ggtcgagtg	agcaaccact	gcactcta	ctgggcgaca	30780
gagcgagact	ccaactcact	caaaaaaaaa	aaaaaaagt	tgaaattgtt	ggtcagaagc	30840
ttccttaaat	caattttttt	ttccttacag	ctcctgtgtt	cctttgtctt	gataagtata	30900
ctcaatagat	aagtaaataa	aatatgaaag	gcttttgaag	cttttgatt	acatggacta	30960
aaacactttc	taccttttat	tttgetat	tgaacatatt	ttcattttaa	aagtcactgt	31020
catgtagtta	tcagttgaaa	tactttat	aacttat	aaaaattgat	tcaaaacttt	31080
ttatcttctt	tattaggtat	tctaccctta	gatttaacac	tcatttttcc	cgagtatatt	31140
ttctcttcaa	tatacaaagg	aatatatttt	catagagtgt	gttgaatatt	aggaaaatca	31200
agagttctgg	ttctgtcagg	tgagttatt	agagtgatt	tttgataaaa	tccagttgct	31260
ctgatattgg	ttgaaaatac	ttgctcctt	ggagtataat	tgagggggaa	aaactgtgga	31320
ataggtagaa	attcaccata	atgacttgaa	ttggttttat	acataatcat	ttgagggttt	31380
gatagtggg	tggctgtctg	gagtgtctt	ggatccaaca	tacatgaaaa	cacaggattg	31440
ccagggttca	cacaaggagg	cagttgttca	gatttcattt	ctgtgtctga	atgtgaagg	31500
gaagtacttt	tcttatccta	aaagataaac	acataaaatc	attctccatt	ataaagttct	31560
gaaaaaaaaa	aaatttaatt	cagtcaccac	cacttccctt	tttcaggga	tctgttctct	31620
tgaggggcatt	gaatgtcagg	cctctgagcc	caagctaagc	catcatatcc	ctagtgaacct	31680

gcacgtatac	atccagatgg	cctgaagcaa	gtgaagaatc	acaaaagaag	tgaaaatggc	31740
cggttcctgc	cttaactgat	gacattacct	tgtgaaatc	cttctcctgg	ctcagaacct	31800
ccccactga	gcaccttggtg	acccctgccc	ctgcccgcga	cagaataacc	ccctttgact	31860
gtaattttcc	attacctacc	caaatcctat	aaaacggccc	caccctatc	tcccttcgct	31920
gactgtcttt	tgggactcag	ccgcctcca	cccaggatg	taaaaagctt	tattgctcac	31980
acaaagcctg	tttgggtggtc	tcttctcttg	acgttgaaga	ctacccttaa	aatcacatac	32040
acctgtacac	agagcaaaagt	tgtcaaaaat	atgctaagtt	acctttttta	acattctgta	32100
ctagaactat	gagaatttat	ttaaaaatct	gtaaatcata	gggaaaaatc	tgtaaaagtc	32160
atagttagaa	gaggaagtac	agcttgattt	tagagtgaga	aaggaacaag	ataaacatcc	32220
agggttagcc	tgggtatgtg	ggcagccatt	aaataactaa	ttacatagct	aactgaataa	32280
ttacaattgt	gataactgct	atgaagaaaa	aaaaatacaa	gatattaatg	aagacagaat	32340
ggggggttctt	atctagtgtt	gggggttagg	gaaagccatt	ccactgaagt	accattcaat	32400
ctaagattga	ctataaggca	aggaagtaaa	agatagaagt	ggggacaaa	tatggcaaaa	32460
gtcaagtaaa	ttaggggtgaa	aatatcatga	gatcagaata	gagagccagg	ggttagatct	32520
cttaggggtt	tgttgactgt	gtttaaaatc	tgaatcttta	ttgtaaaagc	aatgaaaaac	32580
tattgaaggg	ttttaaggag	aggagtga	tgaggtaata	taattctagt	aaaattactt	32640
tggtgtgtgt	tagggcctgt	gtgaatgtgg	tgaggagctg	cagtagtcca	tgtgagtaat	32700
gatgacaata	tatagtaggt	ggtagcatgg	agatggagca	aatttgtttg	ttttgttttg	32760
ttttgtgtgt	ttgttttttg	agacagagtc	tcgtctgtgc	atccaggctg	gactgcaatg	32820
gtgcagctc	ggcttactgc	aacctccgcc	tcccgggttc	aagcaattct	cctgcctcag	32880
cctcccaact	agctgggatt	atgggagctc	accacgacaa	ccagctaatt	tttttttatt	32940
tttagtagag	acagggtttc	accatgttgg	ccagactggg	ctcgaactcc	tgacctcagg	33000
tgatccacct	accttggcct	cacaaagtgt	tgggattaca	ggtgtgagcc	accgcgccca	33060
gcctatggag	caaatttgaa	atatattttg	gaagtagaat	tcacaggatc	tcattgattga	33120
ttggaggtgg	gtgggtgaggg	aaaaggacag	atctaggata	acttccaggt	ttctggacaa	33180
acacttgggc	ggatgggtgg	gccatttact	acaatgtact	acaatgtaat	atgtaaatta	33240
aatatatata	tgtagtttta	tatatagata	atacataa	ttggcactga	aaagcacttt	33300
gcattgatga	tggcttgata	aattaatata	acaagtttcg	tccaggcgca	atggctcaca	33360
cctgtaaact	ccagcacttt	gggaggccaa	ggtgggcgga	tcacgaggtc	aagagattga	33420
gacctactcg	gacaacatgg	tgaaccccg	tctctactaa	aaatacaaaa	attagctggg	33480
tgtgggtggga	tgtgcctgta	gtcccagcta	ctcgggaggc	tgaggcagga	gaggatccct	33540
tggaccatg	aggcagaggt	tgcagtgagc	caagatcacg	ccactgcact	ccagcctggg	33600
gacagagcaa	aagactctat	ctctctctct	ctctatatat	ataacaatgt	ttaaaaaac	33660
caacaaactg	catgaaaaac	tctaaaaaat	gtcatgactg	aatcctgaaa	ttctgattgt	33720
gaattctatc	ctaagaaact	ttattgtaga	aaaattta	tcacagcatt	acttacaaaa	33780
gaactgaaat	gtgtactgat	ttagatggaa	gttaatttta	attcta	taattgccaaa	33840
aatactaagg	gagaagacca	cccctcatat	gaaatccaca	ccaatttctg	cctccaaaga	33900
aagaagaggt	aaaaactaaa	aggcagaaat	ctgacctaat	ggcagacagc	ccggcactac	33960
accctggggc	tggtagttaa	agatcgaccc	aatccctgtc	cggttatggt	atctgtagaa	34020
tacagacatt	ttatggaaaa	gcatttgtga	ccgctgcttg	ctcaatcgat	caggactctc	34080
tactggtgca	tgcagccccc	agtcacgtac	ttagagggga	cgggaattgc	tcactcaggg	34140
tcacgcggac	ccccttagag	ttgtaagccc	gaatggccga	ataaagccct	tccttccctt	34200
agctaggttg	ttggagacgg	gattcttgcc	agtttcactc	tcgtcccca	ggctggagtg	34260
ccctcttttt	tttttttttt	tttgagacga	ccgccttcca	ggttcaagcg	attgtcctgc	34320
caatggcagg	atctcagctc	actgcaacct	cacctggcta	atttttgtat	ttttagtggg	34380
ctcagcctcc	cgagtagatg	ggattacagg	tctccaactc	ctgaccttag	gtgatccacc	34440
gacaggggtt	caccatgttg	gccaggctgg	aggcgtgagc	caccacgccc	ggccaagccc	34500
tgcctcggcc	tcccaaagtg	ccgggattac	ttgtctgcgg	cttgtcctgc	tacaatacta	34560
ttccttcttt	aactcgggtg	ctgaggggtt	ttaa	agtttcttct	gcaaccttac	34620
atagaagtac	ttgaaaatag	cttattttct	tggtataatt	atgtcagaat	aattacaaac	34680
attgatgtaa	gataaacgtt	caccagccc	atagactttt	tgtttaataa	atttcaactt	34740
tgggtattct	ctaaagtgtc	gttagtataa	tgaacaatca	atgttttgtt	tttctttttt	34800
gagatgggtc	acctattaaa	agttaataga	ctggagtgtg	gtggcgccat	ctcggtcac	34860
ttgagatgga	gtctcactct	gttgcccagg	tctcttgctt	cagcctccca	agcagctggg	34920
tgaacctcc	ccatcttggg	ttcaagcaat	atgtttgtat	tttagtagag	atgggggtttc	34980
attacagggc	tgcgccacca	tgcccagcta	tgacctgagg	tgatccaccc	gcctcaacct	35040
accatgttgg	ccaggctggc	ctcggaactt	accatgcccc	gctggaaaat	ctattaaaag	35100
ccaaaaatga	tgggattaca	ggcgtgagcc	agacttacaa	tgactaatcc	tttataaatt	35160
ttaatgactt	cacttactaa	cttttttggg	ttacaaatat	aagaacattt	ctaggcccgag	35220
taatttcaatt	tgcatttcta	gttgggaaaa	agatcagcct	ggccaacatg	gtgaaacctt	35280
tgcggtggat	cacctgaggt	caggagtctg				35340

gcctctacta	aaaatacaaa	aaattagcca	agcgtggttg	cacacacctg	taatcccagc	35400
tactcgggag	gctgaggcag	gggaattgct	tcaacccggg	aggccaaggt	tgcagtgatc	35460
cgagattatg	ccactcactg	actccagccg	gggcaacaag	agtgaaactc	tgtctcaaaa	35520
aaaaaaaaaa	caaaaaaaaa	ccaggcctgg	cgcggtggct	cacgcttgta	atcccagcac	35580
tttgggaagc	tgaggcgggc	agatcacagg	gtcaggagat	ccagaccatc	ctggctaacg	35640
cggtgaaacc	ctgtctctac	taaaaataca	aagaattagc	cgggcgtggg	ggcgggcgcc	35700
tgtagtccca	gctactcggg	aggctgagge	aggagaatgg	cgtgaacctg	ggagatggag	35760
cttgcccttg	gccgagatcc	tgccactgca	ctccagcctg	ggcgacagag	cgagactccg	35820
tctcaaaaaa	aaaaaagcat	ttctctatgt	aatatcttat	atctactcat	attttaaagt	35880
tacttagagc	tgaaaaataa	aaaaagtcct	aatgagttga	aatgaagctg	atttaaaagt	35940
ctttcccat	aaaaacagtc	tttttttttt	tttttttttg	aaacggagtt	ttgctcttgt	36000
tgccagggt	ggagtgcatt	ggcgcatct	tggctcactg	caacctctgc	ctcccagggt	36060
caagcgattc	tcttgccctca	gcctcccagag	tagctgggat	tacaggcatg	tgccacacca	36120
ggcccagcta	attttgtatt	tttagtagag	acagggtttc	tccatgttgg	tcaggctggg	36180
ctcaaaactcc	cgacctcaag	tgatctgcct	gccttggcct	cccaaagtgc	tgggattaca	36240
ggcgtgagac	accacggccg	gcccttaaaa	acattcttaa	agggcagctt	ttaattaact	36300
gttttggtgt	ggagaaggga	gaaagttttt	ctctgtcact	caggctagag	tgcagttagt	36360
atcgtagttc	actgcagcct	caaactcctg	gattccagtg	accctcccaa	gtagctagga	36420
ctacatgcac	accaccatac	ccagctaatt	tttataattt	tttttttttt	ttgagacgga	36480
gtctcactct	tttgcccagg	cggagtgca	gtggcgcat	cttggctcac	tgcaagctcc	36540
acctcctggg	tttaccgcat	tctcctgcct	cagcctcccg	agtagctgga	actacaggcg	36600
ccagccaccg	tgcccggcta	attttttgta	tttttagtag	agatgggggt	tcaccgtgtt	36660
agccaggatg	gtctcgatct	cctgacctcg	tgatccgccc	gccttggcct	cccaaagtgc	36720
tgggattata	ggtgcgacc	accgcgccc	gccttaattt	ttataatttt	tttgtaggga	36780
tgaggctctt	ctatgttgcc	caggctgggc	ttgaactcct	ggtctcaagc	aatcctcctg	36840
ccttggtctt	ccacagcact	gggattacag	gcataagcta	ccatatcaat	ccccagcttt	36900
taacttaaaa	gtactataaa	accatattca	atctactcct	catcaacttt	ttcttttttt	36960
tgagacagag	atctcacttt	gttgcccagg	ctggagtga	ctggctgttc	acaaatggga	37020
taatagtga	ctgcaacctg	gaactcctgg	gctgaagtga	tcctcaggcc	ttggcttctc	37080
aaagtgggac	ttcaggtaca	tgccacagtg	tccagctttc	agtcaattat	taatgttcta	37140
cctgaatagt	gtccctacta	aagtttttga	aagtattttt	ccatgaataa	ggggactgaa	37200
aatatgaatc	aaatataaag	caatttaaac	ttggacaagt	cacttagatt	ctctgtgcct	37260
aaaatttggt	tgtaaaacag	tggagcctgg	attatttgac	ctctcagatc	tcttctacca	37320
actccacaga	atttattaac	cttataaaact	tgaggcagaa	tcacagtgtg	gtatactatg	37380
ttttcatggt	ttgctttatt	ttaatgagaa	tcataagcga	aagagggctg	gatgtgatat	37440
attggaagag	tagcacaagg	cagcaactat	gacctagggt	ctcatacttt	atcatttcac	37500
ctttatttgt	atattatctg	taaaactggt	aaataaaaaa	ctgccatagt	tcctatgggt	37560
gtggagatta	aatgaaagaa	aatgtgatgt	aaatggtgaa	tcactatatg	aatgggatca	37620
attttttttt	tttttttttt	ttttttgtgg	agacaaaagtc	tcactctgtt	gcccagctct	37680
gagtgcaatg	gtgtgatctt	ggctcactgc	aacctctgcc	tcctgggttc	aagcaattct	37740
cctgccttag	cctcccaaatt	cgctgggctt	aaaggcgtgc	gccaccacgc	tcagctaaat	37800
ttattttatt	ttttttgtga	gaaggagtgt	tgctcttggt	gcccaggctg	gagggcaatg	37860
gtgcaatctc	agctcaccgc	aacctccgcc	ttctgggttc	aagccattct	cctgcctcag	37920
actcccaggt	agctgtgatt	acaggcatgc	accaccatgc	ctggctaatt	gtgtattttt	37980
agtagagatg	gggtttctcc	atgttagtca	ggttggtctc	gaactcccaa	cctcaggtga	38040
tccgcccggc	tccgctccc	aaagtgcctg	aattacaagc	gtgagccacc	gtgcctagcc	38100
taatttttgt	atttttagta	gagatggggg	ttcaccatga	tggccaggct	ggttttggac	38160
tcctgacctc	aagtgatcca	cctgcctcgg	cttcccaaag	tgttgggatt	acagggtgtg	38220
gccactgcgc	ctggccaaat	ggaatcaatt	tttatcacta	ttttatttta	ttttttgaga	38280
tggagttttg	ctctgtcacc	taagctggag	tgcagtggcg	cagtcgcagc	tcattgtaac	38340
ctctgcgtcc	caggttcaag	tgattccctt	gcctcagctt	ccagagtagc	tgggactaca	38400
ggtgcctgcc	aacacacctg	gctaattttt	gtgttttttag	tagaaatggg	gtttcaccat	38460
ggtggccagg	ctgttcccaa	actcctgacc	tctgatgatc	cgcttacctc	agctttccaa	38520
agtgtctggg	ctacagtcgt	gagccaccat	gcctcaccaa	attttattat	ttcttttttt	38580
gcaggtttac	ctcaatgtat	gatcttccag	aaacagttct	gaaacctaca	ggttaatgac	38640
cttgatttag	cataaatatg	tttgctaata	ttcacttaat	actcataagt	ttgtagtggg	38700
caaagctgga	aatagaactc	aggttcactg	agtgtcatca	atgttattct	catcagatct	38760
tgctgtttat	tctttttgaa	actgcttatt	aatttgcttt	aaatattaac	aacacagata	38820
ctggataata	gtaaatcata	agaattttta	aattttgatg	gtatctcaac	tgatcagctt	38880
ttcttaaaat	ttctaggttt	cctcagcaca	ggggaaagct	ttataggtgg	aaggtggagg	38940
ccctgtgact	tgcgcagaaa	agtaccactg	taattttact	ttatgggcac	ctaagcaggt	39000

tgcccagggc	aacttgtaga	ttttgttggt	gttggttgta	atactatctc	cttcagtcac	39060
tgagaactct	tttttatttt	tttatttttt	gagatggagt	tttgctcttg	ttgcctaggc	39120
tggagtgcag	tggcgtgatc	ttggctcact	gcaacctccg	cctcccggat	tcaagcgatt	39180
ctcttgctc	agccacccga	gtagctggga	ttataggcat	gcgtcaccac	gcccggctaa	39240
ttttgtgttt	ttagtagaga	tagtgtttct	ccatggtggg	caggctgggc	tcgaactctt	39300
gaactcaggc	gattcgctg	cctcggcctc	ccagagtact	gggccttaaa	tgctggaatt	39360
ataggcatga	gccaccgcgc	ccagctgaga	actcttcttg	ttatcaaata	accctcttta	39420
ctactgggtc	tagaatttctg	ttcagctttg	gctcaaaaaca	taatgcagaa	aacgaaatct	39480
agtaaaaaaca	gaagacaaat	tagctgataa	actttgttgg	cataattagt	accataaaat	39540
ctggaaaagc	taaatcttaa	attaaaaatt	ttttagattt	ccaggataat	tcacaaatgt	39600
ttatagattc	agaaacaaaa	gggtccattgc	tttatacttt	acatcataga	caaccactgc	39660
agttttctaa	tatgggtttc	accttcttca	aacctgatata	tcttaaaatg	tggaagttaa	39720
actgactata	gttaagaacg	aaacaaatag	ccaatacaaaa	gaataataaaa	aggatgagtt	39780
caaattatct	gccacatgtc	atcaactttt	attaaatgat	aaaaagggtta	attaaaattg	39840
taaatgattt	ttcagaagaa	attacatctt	aaaattggcc	tgtgaaagtg	gcttgaaagg	39900
tataaaaaatc	taccagtagc	tggtattagc	tttcttagta	atttaatttt	cagttagaga	39960
aagccagacc	actttgacct	ttcgaagtc	tttggtatag	atacatatac	atttaaaaaag	40020
ataaatgaaa	acaagccatt	gattaataat	gcccacgcga	gaagctgtaa	ttataaaatt	40080
aagatttttt	gatgtcactg	ttgatgttga	atatagttaa	tagaaaagca	aaaataaaaa	40140
ataaaaaagg	tctaattttg	aggcactctt	ttgtctctgc	tcagggtccac	cgtcttcctt	40200
gctaattgtt	acgtttatta	ttaatttttc	cattttattta	tttactttta	ccacaattag	40260
gggacagaga	atgaaacctt	aactttttat	tgttctgtga	aagagtgaat	ataaatgtaa	40320
gatttttttt	ttttgagacg	gagttttgct	cttggtgccc	aggctgcagt	tcagtggcgc	40380
aatctcggct	cactgcaacc	tctgcctccc	aggttcaagc	aattctgctg	tctcagcctc	40440
ccaagtagct	gggattacag	gcccgcgcca	cctctcctgg	ctaatttttt	gtatttagta	40500
gagacggagt	ttcaccatgt	aggtcaggct	gggtctcgaa	tcctgacctc	aggatgatcca	40560
cccgttctcg	cctcccaaata	tgctgggatt	acaggcggtg	agccccggcg	cccggccacc	40620
aaatcctttt	tcaaaaacaac	tcccttcttt	gacacagtgc	aattttaaata	agtatacaat	40680
taacaaagta	cgtttttctt	gttcaaaaacc	atcactgaac	agtttgcaac	agtaggggtat	40740
gaatgcatac	aatctcgatg	gtctttacac	cttcagaggc	tattcggact	taaggaaacg	40800
tgcattttaca	agtgtaaatg	taaaagctca	gtagttgcct	tgtaaagtgc	ttttcggggg	40860
tgtgggggtg	gggggtggtg	gagtaggtgg	tgcctcaaat	tatactagcg	aataccaaca	40920
ttcccaaaca	tctagccctc	tgccataaact	caccgcggtg	cggtctgtca	ttttcgctct	40980
tctttgttaa	ttttttcggc	aaagtcagtt	ttcatgcagc	agatggcaag	aaagccgggtg	41040
aacgcctagg	gacgtggcct	tttaaccgca	cccaattaaa	gcagcaaaaa	gaagatgaat	41100
agctgggtgg	atcagtatgt	gtaaacctat	ccgtttaaat	cggggagctg	ttttcccggg	41160
tgaaccacag	aattctttct	ggaggttgca	actcgtaacc	atagcaactg	gaagtggctg	41220
ccggctcccc	gatgttggtg	ggatctcgcg	ccgcctggcc	cagcttcccg	cagccgcccc	41280
gcggcgccct	gcgttccact	tcgggagtg	tagttcttct	cttcaccgct	gcccggcagg	41340
aggcgcaggc	gggactacgc	gtcacggcat	gcactgcggc	gcccagccgg	tcaccgcctg	41400
ccggctgcag	acgcctgcga	gcaggttggt	tttataagag	gcgtcattgg	cgcccagagct	41460
gtgaccgcgc	ccactggggc	agccagcaca	atcgggcgga	ggtggcgctg	ccccttcagg	41520
tactgtacta	ggcgggctta	gaccccgga	gggggtttgt	gccgactgtc	tgagtccctg	41580
gccgacacgc	tcggctcagt	agaggagcag	tggcggggtc	cgctcctag	gctggggctg	41640
ctcgggcggg	gacttgacgc	ctggtgtcag	cggccgcagc	ggcgacctcc	tcgggcccgtg	41700
cgcgagtga	cagctccgga	ggccccagcc	gacctggggg	cgcccggtcc	ggtgggtctt	41760
cagcctccaa	accccagtg	ctataccgaa	ctgcgcgcca	aggggtgggag	agctgacggc	41820
ctgggcccac	cttcttctct	cactgggcag	gctttgaggt	gcttgcgggt	ctggactgat	41880
gaaaatccat	atggttaagat	gttatgtgcg	tcacctgtcc	gggtttaatg	ccagcctgtc	41940
ttttgatgac	atttgagccc	ccgtgatgtc	aggaatagaa	agattaaata	ttaaataatg	42000
cccggagact	tcgcctagca	cgccagcctg	atgatgatca	aatacctctc	catatccttc	42060
tcagttcca	gtggcctcct	ttagctttgg	tctccctaata	cgatttgtcc	tcattagcag	42120
ctgtcccatg	cagtgccttg	tacgcgttgt	ttatgtttag	cactattggg	agcgccaagt	42180
aaggatattt	attgagtggg	gaagtttgca	ctgttctgct	ctacttttat	tgaaaaaacac	42240
agttgggcatt	tcttgtagtt	agaatagcta	actatatagt	actatgaatt	ttagatttgt	42300
ctcctccaat	ctacaggata	gtgcttgaaa	tatcgctatt	actgcacgt	atcttttaag	42360
attagaatca	tattgggtcc	cacacgtctc	aggggatatt	tatcacacac	atccagtgtg	42420
aatgggtttac	ttttattttc	tgagttcagg	tcatatagca	gaagatggag	atgggtgagg	42480
tattattttta	attcatattt	tttttttttt	tgagagaggg	tttcgctctt	gttgcccagg	42540
ctggagtga	gtggcgcgat	ctcggctcac	tgcaacctct	gccttccagt	ttcaaacgat	42600
tctcctgcct	cagcctcccg	agtatctggg	attacaggcg	cccgcaccca	cgcccagcta	42660

aattttgtat	ttttagtaga	gacggcgggg	cggggggggg	ggtctcaacg	tgtcggccag	42720
gctggtcttg	gactcctgac	ctcgtgatcc	gcccacttcg	gcctcccaga	gtgctgggat	42780
tacaggcgtg	acccaccgcg	cgggcgttaa	ttcataat	ttacctttt	acgctgaggg	42840
cgggaatttca	gtcaaaaaag	ctgattaaaa	atcagcccaa	atacaattta	aaggtgtggg	42900
aaatactcct	tcttagatga	aaacagttta	gaaaatagtg	taattgcaat	tttgtaaacc	42960
atggaacaaa	aagtgaacat	aacttctttt	agaaatgact	taaaggggtcc	agagcgggtg	43020
ctcaggcttg	taatcccagc	actttgggag	gcccattgcag	gtggatcacc	tgaggtcagg	43080
agttcgagac	cagcctggcc	gacacgggtga	aaccccgctc	ctactaaaaa	tacaaaaatt	43140
agcctgtaaa	cccagctact	tgggaggctg	aagcaggaga	attacttgaa	cccgggaggc	43200
ggagggttga	gtgagccaca	agatctggcc	accgcactcc	aacctgggtg	acagagtggg	43260
attatctcaa	aaaaacaaaa	aaaaaaaaaac	aaaaaaaaaa	aaagagaaaa	agaaagaaaa	43320
gaaataaagg	atattccacag	ttataaaaagt	gtagatagtg	aaactagaaa	tgatttttct	43380
tgtactttcc	tgtatttttt	aagtttttctg	tagaaaaaac	ttttaaaaaa	ggatgcaagt	43440
attaacagca	ctttgagagt	ttctatatca	tttttttcac	tttctagtgg	aaagccccac	43500
ccttatgcaa	aaaaaaaaaaa	aaagcagcaa	ttccagttat	ggactctatg	aacattactt	43560
taaaaagaaa	ataaaggcct	agagcagtg	ctcatgcctg	taatcccagg	actttgggaa	43620
gccaaggcag	gcggatcact	tgaggtcagg	acttcaaggc	cagcctggcc	aacgtggcaa	43680
aaccccgctc	ctactaaaaa	tacaaaaatt	agctgggcat	ggtggcggat	gcctgttatc	43740
tcagctattc	aggaggctga	ggcaggagaa	tcgcttgaac	ccgggaggca	gaagttgcag	43800
tgagccgaga	tcatgccact	gtactctagc	ctgggtgaca	gagtgcagct	gtctcaaaaa	43860
caccaaataa	gcaacaacag	taaaaaacac	aggcaaagtc	cctgttgctg	catctgtaga	43920
ctatatgaat	ttaagtgtaa	attattttgga	gagtggggac	aataaatgaa	atagttggac	43980
tcgaagaaaa	taacagatcc	gacaatttgt	agcatttgtg	gatctcattt	tatttttttg	44040
agatgatgtc	ttgctctgtc	acctagtctg	gagtgcagtg	gcctggacac	gacttactgc	44100
agcctcctgg	gctcaagtga	tcccaacaca	gcctcccaca	tagctggggc	tacaggcaca	44160
tgtcaccagg	cctaggcctg	gctattactt	tttttgagac	agagtcttgc	tctattgtat	44220
ggtggttcag	tctcggtcga	ctgcaacctc	tgcttcctag	tagctgggat	tacagtgtga	44280
ttcaagctga	gttcaagtgt	gattctcctg	cctcagcctc	ccagtagctg	tcacatgtca	44340
cagacatgtg	acaccatgcc	ccactaaatt	tttttttgag	acggagtttc	gctcttggtg	44400
cctagactgg	agtgcctatg	caagatctca	gctcaccaca	acctccgcct	cctgggtttca	44460
agtggttctc	ccgcctcacc	ctcccagta	gctgggatta	caggcatgtg	ccaccatgcc	44520
cggctaattt	tgcatttttt	agtagagaca	gagttttttc	catgttggtc	aggctgggtc	44580
caaactcccg	acctcaggtg	gtccgcctgc	ctcagccttc	taaagtgctg	ggattacaga	44640
cgtgaccac	tgcccctgac	ctaatttttg	tatttttagt	agagactggg	ttttgccatg	44700
ttagccgggc	tggtcatgaa	ctcctggcct	caagtgatct	gtccgccttg	gcctcccaaa	44760
gtgctgggat	tacaggcacg	tagctgggat	tacaggcaca	caccaccatg	cccggttaat	44820
ttttgtattt	ttagtagaga	tggggtttca	ccataatggc	caggatgggtc	tcgatctcct	44880
gaatgcgtga	tccggttgcc	tgggcctccc	gaagtgctgg	cattacaggc	gtgagccacc	44940
gcacctggcc	ctaattttta	aattttatgt	agaggcaggg	tctcgctatg	tttcccaggc	45000
tggctctctt	gaactcctgg	gttcaagcga	ttttcctgcc	ttagcctccc	agagtgcctg	45060
atacaggcat	gagagctcca	tgtctggcct	gtacatccca	tcttttgatc	tggtttcttt	45120
tcactttgta	cagttaaatc	agaggtgaaa	gtacttagct	tttcttcact	taagcctgga	45180
aaatcttaaa	cttgtcaaca	ttgaatcacg	ttcagaacca	tgttttatat	gtctgatatt	45240
ttggcttatg	tctatttttg	tttttatttt	ttgttatggg	tatgttgga	atggactggg	45300
aagtagtata	atcaatcatt	agcccacatt	ttgctttctg	ttgtaaaggg	ctacattgtt	45360
cttccacagt	aataatacag	acatttttct	tttttttggc	tactatcagc	ccttaaaaaa	45420
taaggggggt	taccttaaca	ccaagtgtcc	attaacactg	gataaaatat	ctattctaaa	45480
gtggtttaca	aaaaaactg	gtaacacgtt	gtttttcagg	ttgtgggtgt	catactttat	45540
tttcttaggt	tgtcttcttt	ggagcttgcc	tactccaaat	gtcaatttct	tttcaatatt	45600
ttttacctta	taattttgta	tattctgtgt	actgagttgg	ctcaatatgt	tattaggctt	45660
tgggtctatt	cacagggcat	aagaaaaatt	cataattgat	taacatgtct	gatttactaa	45720
ctcattccac	agtattattg	tatgggttgt	ataattatat	tcttatgcaa	gttaaagaaa	45780
gacttttaaa	aattaggtgc	atatgaactg	ctaaaatcat	ggaagtagta	gtttttgaac	45840
atgtaagaa	catgaacaca	gcagcaaggc	ctgttaagtc	caaggctact	taaacaaaaa	45900
atgcagactc	atctaacagt	gcagaactgc	tggaggctga	attatgtttg	tgtttctttg	45960
tgggtgaagat	gaggaagttg	cagtattgta	agtgataaag	gattacattt	tcacaaattt	46020
ccttcttgac	agttccataa	ttgtaaactag	actaaaacac	ttgggtttcaa	aggtcatttg	46080
caatgtattg	catcagataa	acttgcccat	attttctctc	aatttgagtt	ctaagatgaa	46140
attcagccct	atgatatggg	aaggattgta	attaagtgat	aaataaaggg	attttttccc	46200
ccaaagggta	tttaatgtgt	ggaaacctct	ttaagggtct	atagaattac	ctgaggaagt	46260
attagaaaaa	aagaagtggg	agttaagtat	ttttttctgt	catcacagga	agcctgaaat	46320

cttttttttt	ttttaagtac	ttatccaaat	cactattctt	ttaaaatctt	acaaaatctt	46380
acttctgggt	catattgcca	gcatgttgaa	atgtaaaaag	agcattaggt	tggaaatcag	46440
aggattttta	atgatgttga	ggaagttatt	atttataaatt	ttctgttcgt	tttcatttgg	46500
aatttgtaaa	taatagcaag	ctgcctttat	gggggtattt	gtgaagatta	aatcagatat	46560
gaaaatgaaa	ttgcttttga	agtgggtggag	ttatctactc	atatgaagta	ttattgtact	46620
aagtgcattt	acataaagca	cttatatggt	tgaagtgtga	tgccttgatg	tgataaatac	46680
tttttgactg	ggaagtttga	tgaagaaaaa	aagtcaaatg	ggttattcat	ttgatttctt	46740
ggtagagatt	ggtggctttt	tccagactga	aggaaacctg	gctcctctcc	tgactgtgac	46800
tttgactctt	gttgcacaa	atgtcctgaa	actgcagtgt	acttctgtgg	ttgagctttt	46860
aattttgggt	ttgatttgtt	ttaatctcac	ttctataagt	gtaagaatgg	tcacagctct	46920
agtttgacaa	taggaagtag	ctattgtttt	taatatcttc	aaatggatct	ttaagttatt	46980
tcatgaacaa	tgagactaca	ttgaatgtga	aatctcaggt	cctctgagaa	atacatttca	47040
tgtttaaaagc	attagtcttt	gagccaaaga	aataatggag	tttagatttt	tccttctggg	47100
gaagttatct	ctggctatga	gaggatctga	cccttgagat	taacttcaag	ttaggttgat	47160
atatagaata	tttacgataa	agaaaaagta	ttttagaaac	aagtacatat	tggtctgggtg	47220
tggtggctca	tgctgttaat	cccagcactt	tgggaaggctg	aggagagtgg	atcacctgag	47280
gtcaggagtt	tgagaccagt	ctggcccaac	atggtgaaac	cccgtctcta	ctaaaaatac	47340
aaaaattagc	ctgacttggt	ggtgtgtacc	tgtagtccca	attactcagg	aggctgaggt	47400
gggaggatcg	cttgagccaa	ggagtttgag	gttacagtga	gctgtgatgg	tgccactgta	47460
ctcccgcctg	ggtgagtgc	agagcgagat	cctgtctcta	aaaataaagc	tataataaag	47520
acatttaacaa	ataaaattgg	agctatttat	caaaactttg	aacttaatac	taattaataa	47580
agtagctcaa	ggaaaaaagt	aagtagtgta	agctaccatt	aggcaaatta	tgctgagaag	47640
tatagtaagt	gctatagatt	caggggaaaa	tgaatctgt	atgtcagaaa	cagtgatcta	47700
ggaaaatttc	atggggagaag	acagctttta	atacagaaat	cagaatgaag	gaagaaaagc	47760
atctcaggaa	gtgaagacat	ggagttaggg	ttgtccattt	tgtgttcaga	agacagcaat	47820
taaattactt	cagccatatg	acgaggaaaag	ctaatacagat	tagttgcaa	ttaggtgaga	47880
accagatagt	gggagttttt	cagtgtcaca	ctaaggagtg	tgtctttatt	gtacagaata	47940
cttactctta	aagttgggca	gactctgagt	gggaagaaaa	atatttttagc	actgggtata	48000
agtgtatgta	acctgcagtc	tcttctatct	ttgcctctat	gtttataggg	tagtagtggt	48060
tttttttttt	ttttgagacg	gagtttcatt	cttacgcccc	ggctggagtg	aaatggcgtg	48120
gtctcggtc	actgcaacct	ccacctctg	gttcaagtga	ttctcctgcc	tcagcctccc	48180
gaatagctgg	gattacaggc	atgggccacc	atgcctggct	aatttttgta	tttttagtag	48240
agacggagtt	tcgccatatt	ggccaggcta	gtcttgaaact	cctgacctca	ggtgattcac	48300
ccgcctcggc	ctcccaaaat	gctgggatta	taggcatgag	ccactgcgcc	cagcagtagt	48360
gtgttttttag	ggagggacag	ggaaggttga	aaaatggcac	tgtagaaagc	catcagtacc	48420
atagcaatta	aaccagcgtt	gtagtggttc	aggaatagaa	aatagatcag	tggaaacagaa	48480
tagagaacac	agaaatggat	taataaatgt	gtgggacttt	atatgacaaa	aggtggcatt	48540
tcaaatata	gaaaaagtgt	ggaatattca	atatttggtt	taatttccac	ttcacacca	48600
aagaaaaaaa	atccaaatgc	atgaattaaa	cagctaaatg	taaaagccaa	aaactgtgga	48660
agtattagta	gaaaaatacag	gagaataatt	ttatagtctt	gggagcagga	aaaactttct	48720
aaaacaagat	acaaaatcta	gatactataa	aggacaccct	gttttccagc	ctctacattg	48780
actgtataaa	atttgaaaca	taataaagat	actttaaaaa	tgtttgaggc	atgctagaac	48840
attaattcat	gacccaactt	ataaggaact	acaaatcagt	aatgacaatc	taataggaaa	48900
gtgaacatat	gaatatagat	gcttcacaga	aaaggagatg	aggatagcca	gtaaacacaa	48960
gatgcacagc	cccactgaag	tcttcttgga	agtgcagatt	aaggaaattta	ttattttgct	49020
catgagatga	gcggaaatta	aagatgggtg	ttactctggt	ggtgggattg	tggagaaata	49080
ggtactttca	tatgttggtg	gcagcaactt	tgtactacct	ttgggagagc	aatttagcaa	49140
tatctataat	tttttttggt	tgttttggtt	tgtttttggt	tttttgagat	ggagtttcac	49200
tggagtgtgc	ctggcctttt	taattttatt	ttgagatgga	gtctggctct	gtaaccagag	49260
ccttagtgca	gtggtgtgat	ctcggtcac	tgcaaccccc	acctcctggg	ctcaagcgat	49320
tcttctgcct	cagcctccca	agtagctggg	attacaggca	cgcaccatca	tgcttggtta	49380
atcttctctat	tttagtacag	gtgggggttc	accatgttga	ccaggctggg	ctcgaactca	49440
tgacctcggtg	atccgcccac	ttcggcctcc	caaagtgtg	ggattacagg	tgtgactcac	49500
cacccctggc	cttttttttt	tttttttttt	taattttgag	tagagtatct	tgtccaggct	49560
ggagtgtcag	ggtattatct	cggctcagtg	caacctccac	ttcctgggtt	caagcagcaa	49620
ttctgtgcc	tcagcctccc	gagtagctgg	gattaaaggc	tcctgccact	atgtgggcct	49680
agctaatttt	tttgtatttt	tagtagagat	gggtttttgc	cacggggccag	gctgggtctca	49740
agtgatectc	ccaaagtgtc	gggattatag	gtgtgagcca	ccacgcctta	ctaatttggt	49800
gtatttttag	tagagatggg	tcttcaccat	gttgcccagg	ctggtctcaa	actcgtgagt	49860
tcaagcgatt	tgctgtcctt	ggcctcccaa	agtattggaa	ttacagacgt	gagccaaagg	49920
gccccggcctg	tggcttttcg	tggagttctt	agaacgtaag	ttttctgtgc	tgttgtgcct	49980

tctactttct ctaccttttg

50000

<210> 9

<211> 50000

<212> DNA

<213> Homo sapiens

<220>

<223> human DYXC1 chromosomal gene region, nucleotides
150001-200000

<400> 9

```

gaatgtcttc actttccagt cccttttacc tagataatth gaattactct ctgaaggctc 60
aacctacttt tcatgagtta cagatatttg cttcttaagg atcttttttt atcagtttca 120
ttttgatatt ttagatgtga attcaatttg gttgacagag tcttgctctg tcaccaggc 180
tggagtgcag tggcacaatc ttggctcact ttaatctctg cctcctggat tcaagccatt 240
cttctgcctc agcctcccaa gtagctggga ctacagggtc ccaccaccat gcccggtag 300
tttttttttt tttttttttt ttgtattttt agtggagatg aggtttgcac catggtggcc 360
aggctaactc ggaactgtac ccgacctgac agttgatctt tttaatatth agcttagctt 420
atctctaggt gtttcatcca tagaactaaa tctcagttgt gttcaggtag aaaaaagatg 480
gaaaactact cattcattct tcagaactgt tttcaggact tcaaggaggc cttccctaac 540
caccctatth aacattccag ttcttgacc atccccacc ctactctgcc ctcacttttt 600
tctccatggc actgggcacc agctggctaa ctctgtcttc aaaaagtact tttctttggg 660
ggaggttttt cttttgtttt tgttttctt ctttcagttc tgtatcttca gcacttagaa 720
gagttcatgg cacacagtag gtactcaata agcatatgtt gaaagaatga atgcagtttc 780
atgttccgga tgaggtatgg ctcatthaaa atattttcat atgtttatta gacaaaaagt 840
agccttcaaa aaagtthtca tgctgggcgc agtggctcac acctgtaatc ccagcacttt 900
gggaggccaa ggcaggcgga tcatgaggtc aagagatcga gaccatcctg gccaatatgg 960
tgaaaccgca tctctactaa aaatacaaaa attagctcgg catggtggtg cgcacctgta 1020
atcccagtta cttgggaggc tgaggcagga gaatctcttg aaccgggaaa gcagaggttg 1080
cagtgaaccg agatcgcgcc actgctctcc agcctggaga cagagtgaga ctctgtctca 1140
aaaaaaaaaa agttttcatt agttgggatc ttgtatcttc ttccctttct caagtgatgt 1200
gttttaaacg agacattttc atatcctttg gcgagggtga aagaccaga ctttttgaaa 1260
agtattttac aaatacgttc ttgaaagcac tccagactga ctgcttatc ttgggtcaca 1320
tgacagtaca gctgcacttt gaggcctttg cctatagcct attggttgcc ttacttcgga 1380
attgtagacg tgtgggagaa taatgtctcc attcttctcc atcttatcta gttctagaag 1440
atataatggg aatggaaacc tcaccttttt catagtaaaa tgtagctacc caggaatgat 1500
gaggggcacc atcatatcag gtaatattca ttccagttat attttatgag gtaaaattga 1560
tactgttggt gtgtgtgtct tacagatttt gacaggctcc accaaagtgt ttttaaatga 1620
cttatttagc ctctaactct cccctgaatt cagtctccag acgcctactt tatgtttcct 1680
cttggtatgt ataataacta tctcagattt aaaatgcccc aaaccaattt gctggtttcc 1740
ttttcttctt cttttttttt cttgagatgg agtcttggtc tgtctcccag gctggagtgc 1800
cgtggcatag tctcggtcca ctgcaacctc cactcccgga gttcaggcga ttctcctgcc 1860
tcagcctccc gagtagctgg gactacagge atccaccaga ccacctggcc aatttttgta 1920
tttttaatag agacagggtt tcaccatggt ggtcaggctg gtcatgaact ccttacgtca 1980
agtgatctgc ccacctcgge ctcccaaagt gctgggatta cagggtgtgag ccaccatgcc 2040
cggcccaatt tactgatttt cttctcataa cctgctcttt ttgaagtctt tctgcctcag 2100
tagctattcc attctagtag tcggtgagge caggagtcat cctttatacc ccatattcaa 2160
tacatcagga agtctgttg gctgctgtac ctttgaaatc cgtgtataat ctgtccattt 2220
ctcactgtct tcaactgccac cattctagtc caaaccacca tcatgtctca cctggattat 2280
catagtagcc atgcaaatga acttcttgct tctgcctttg ctccccaca atgctgtccc 2340
agtaggttag cagagtgate ttttattcct tttctcaaaa cgcttctgtg acttttagtt 2400
ctcagagtgt aaagctaaaa cgctttttta aaggagtctt aggatctgta agcctactc 2460
agtctgtccc cttgccacca ctctgtttat tatcttgtgg gttttttttt ttgtttgttt 2520
ttttttgaga cggagtctcg ctctgtcgcc caggctggag tgcagtggcg ccatctcgge 2580
tactgcaag ctccgctccc cgggttcacg ccattctact gcctcagcgt ccgaagtagc 2640
tggaactaca ggcgcccgt accacgccc gctaatcgcc cggctaattt tttgtgtttt 2700
ttttagagaa cagagtthca ctgtgttagc caggatgggc tcgatctcct gacctcgtga 2760
tccgcccacc tcggcctgga gtgctgggat tacaggcggt agccaccgcy cccggcttat 2820
cttgtgttta atcttttctt cctctctcct gctaggcgat ccacacagge ctcttgtctg 2880

```

tttctcagag	gtagagctct	gatctcagct	ttatagctac	tattttcttaa	atgctcttcc	2940
tccagttaac	tgtatataat	ggtgcctcac	tcattcaa	ctttgctcac	atatacttca	3000
gcaatgaagc	ttgccctgac	catcgTTTT	agagttaagc	ttctctatcc	cagcataaat	3060
ctatcccaga	ataaatctcc	tcaaatatTT	tacagggttt	gactgtTTTT	gtcgacataa	3120
gtctaagggt	tttgacctga	atgtgtgggtg	actcttgctt	gtaatggctg	tattgtTTTT	3180
ggctactgca	attctgtgag	ttagcagaaa	taggagcagc	aggaagatga	tttcagtatt	3240
gtagctggtg	tgtgttaa	acttgagaaa	cctgcaaggg	gacatcaaaa	gcaattggaa	3300
atatatgact	agagatcgag	ttaaagaa	tactctgagg	aataaaagga	agcctgagcc	3360
taaacagagc	ttcaagttta	ttgtcttcac	aaagtattct	tctttttata	accgtatgat	3420
ttcttagcct	ttgtaactgt	cctgtaaa	ctgcttattt	ctaaattact	attagtaaa	3480
ctcttaaaat	ggggagggtt	tatacattta	ccaatgggtca	gattaatggg	agaggaagct	3540
catggatttc	tccagaattt	tgagttcttt	tttttttttt	tttttgagg	tggagtcttg	3600
ctctgttgcc	caggctggag	tgagtggtg	cgatcttggc	tactgcaac	ctccacctcc	3660
tggtttcaag	caattctcct	gactcaggt	cctgagtagc	tgagactaca	ggcgacgcc	3720
agcatgcccg	actaatTTTT	gtatttttag	tagagatggg	gtttcactat	gttggccagg	3780
ttgggtcttta	actcctgacc	tcctgatctg	cctgccttgg	cctcccaaag	tgctgggatt	3840
acagggtgtga	gccaccgcac	ccagccta	tttgagttct	gtaaagaaca	attaactgca	3900
ctatcaccca	gacgtgggtta	cctttcttgt	ttattgattg	cttaatatgt	atttagcatt	3960
cattcaatat	gtgttgaggaa	tacattatag	gctgggtaaac	aagcaattac	agcacatat	4020
tctataat	gtgccagatg	cagaaaataa	taagagctct	agggatgggg	tcaagggatg	4080
tttctcaaag	gaaatgaacc	gttagctgag	acaagcagag	gagtttcggt	ggaggtaaa	4140
gggatgggca	actgatcaga	atatgtaaag	ccctggagta	aagacaaagc	caagcatttt	4200
gaggggaact	gagaagggtg	ggcaaagcgg	gaatgaatta	aaagagatga	gagctagaga	4260
taaaatactt	gatattcaag	gctttggggc	attatcttga	agaaaatctt	aacattttta	4320
aggaattaca	taatgagatt	atcatttgaa	gatctctagc	tataatgggg	aggttcaaac	4380
tgccaggggg	ctttcatatt	cactgtgtct	aggatagggc	ttaaaaagtt	actttttttt	4440
ttttcctttg	attgtagtac	acgcccacaa	ttttgagaac	agttgaatta	atagggttct	4500
ttagtaagcc	tgtagttttt	gcttatccaa	attgtcatgg	tggtgttagg	gccagcggga	4560
aatctttttc	tcttttgggc	tggtgggtgt	taccaaaaca	ccaggggttt	ggtctaggtc	4620
ctgctgcttg	ccgcacagaa	agccaatcac	agagacgggt	attgccaggg	aagaaggctt	4680
taattgggtg	ctgcagccaa	ggacatggga	gatcagttct	aaatccatct	cagtctcaaa	4740
tccatctctg	actgactaaa	attagaggtc	tatatagcag	agaagaaatg	taaccatgtg	4800
tgggcaaaca	ggaattagag	aggggtgagg	aagagaagtt	ggtcaacagg	cagcaggtgg	4860
tcagttaagc	aatcatgcag	gctctggctt	ctcattgtcc	agttgcagtg	atctgttaag	4920
taagtttcag	cttcttaata	ctatctagga	ggcctgatgg	tttgtttctt	aagaaaggag	4980
cttagataac	acaaatagaa	ctttctcaag	ttttaagact	gtgaggatca	atttctgtat	5040
ttattcagag	aaaccataaa	gatcagttct	gtgggataat	tggctgggtt	caatgttatc	5100
tttctttgaa	ggaagtaaac	aaagcattaa	actggggcct	gattaaagtg	ggcttattga	5160
tttgagaaat	tcaagtattg	taagttgtcc	caagtcagta	atgtatttta	cttttttttg	5220
taatctgtta	gaagatggga	gcaggcaaag	ggaaggaggg	aagctttcac	acagtggaga	5280
aagaatgctt	tttaggcttc	agccagtttt	tcttatcaca	aagccctcac	ctacttcttg	5340
tttcatatag	aattcttcca	gttaccaggt	cacttaaacc	agaaacctgt	gagctatcct	5400
acactttctc	ccttatatag	ttggttattc	agtcctttta	taaaataatc	tttaggctgt	5460
gtacagtggc	tcacacctgt	aatcccagca	ctttgggagg	ccgaggtggg	tggatcactt	5520
gagcccagaa	gtttgagacc	agcctaccaa	actagcaaga	ccccgactct	taaaaagaaa	5580
ttagctgggc	aggggtggc	atacctgtat	agtcctagct	acttgggagg	ctgagatggg	5640
agcatctact	tgaacctggg	agtttgaggc	tgtgttactg	gtggagggtg	tccaggttct	5700
tggcatcttg	aacaaagaac	tggacaaaac	acacagacaa	agcaagggaag	ggatgaagtc	5760
agagatttat	tgaaaatgaa	agtacactcc	acagtgtggt	ggcgggccct	agcgtagggg	5820
ctcaagggca	ccgttataga	atgtgtgggg	gtttcaatac	cctctagagg	cttcatttgg	5880
ttacttggtg	tataccctat	gtgaatggag	aggtgaagta	aagttacaaa	gtcattttact	5940
tgggtgatgc	cctatggaga	ggatatttcc	tgtcatagct	gaagtgtgaa	tcggccta	6000
gttccctgcc	tccagacctt	attttcccat	ctcagcaagc	cgtgttcata	ctactgtact	6060
ccagcctgag	tgacagagtg	agaccttgca	tccaaataat	gataaaaata	ataaaaatac	6120
ctttcatgtc	ttctcagatc	tcttcaaaa	ccttcccgct	atcttctaaa	ccctttccct	6180
cattcaacact	ggttaagttc	agatgctcat	atttttcatg	gaatattatg	ttgcttccct	6240
gcatcccaca	gggtctagggt	tgttgagttg	cttccctatc	ttgaaaaaaa	acattttttt	6300
gagacagggg	cttgctctgt	taccaggt	ggagtgcagt	catgcagtca	tagctcactg	6360
caactttgaa	ctcctgagct	caaatgatcc	tcctgcctcg	gcttcccaag	tagctaggac	6420
aacagggtgtg	ggccaccatg	tcctgctgat	taaaaaattt	tttttggtag	agatggggag	6480
tctcactatg	ttgcccagcc	tgggtctgaa	cgcctggcct	caagtgatcc	tccacctca	6540

gcctccgaaa	gtgctgttac	aggtgcaage	cgccactcct	ggccctgcc	tcttaatat	6600
tgctatttaa	tttaattaat	taatttat	atgttgagac	ggagtttccc	tcttggtgcc	6660
caggctggag	tgcaatggcg	ccatcttggc	tcaccgcaac	atccgctcc	tgggttcaag	6720
caattctcct	gcctcagcct	ctcgagtagc	tgggattaca	ggtgcttgcc	accatgccc	6780
gctaattttt	tgtattttta	gtagagacag	ggtttcatca	tctttgccag	gctggtgttg	6840
aactcctgcc	cttatgatct	acccgccttg	gcctcccaaa	gtgctgggat	tataggcgtg	6900
agccactgca	cctggccaaa	tctgaccaga	tacaaccgct	tatgcctgtc	atcctagtag	6960
tttgagaggc	caagaaagg	ggatcacttg	agctcaggag	tgtgaaacca	acctgggcaa	7020
catggcaaaa	ccctgtcttt	acaaaaaata	caaataattag	gcatggtggc	gcacacctgt	7080
agttccagct	actcaggagg	ctgaggtggg	agggtagctt	gagcctggga	ggtcaaggct	7140
gcaatgaact	gtgttcatgt	cactgccctc	cagcctgggt	gacaaagcga	aatcctgtct	7200
caaaaattaa	aaaaaaaatc	atggccagg	gcggtggctt	catgcttgta	atcccagcac	7260
tttgggaggc	tgagttgggt	ggatcatgat	gtcaggagat	ggagaatctc	ctggccttta	7320
gtagagatgg	tgaacccccg	tctctactaa	aagtacaaaa	attagctggg	catggtggcg	7380
cgtgcctgta	atccccgcta	ctcgggaggc	tgaggcagga	gaatcgcttg	aaccagggag	7440
tcagaggttg	tggtagcccg	agatgacgcc	actgcactcc	agcctggtga	cagagtgaga	7500
ctccgtctca	aaaaaaaaaa	aaaaaaaaat	caaatactgat	cttttaaact	atatttgtac	7560
tagattgtct	tttttat	ttattttttt	aaagaacttt	catattcttt	tacatttttc	7620
tgcctttgtt	tttctgtgt	gatgcttttt	cctttttcac	tgggacatct	ttccttgcca	7680
tcagatcttt	tgattttttt	tttttttttt	taggaatcag	aaatcgcttt	gtttgttttt	7740
tgcaatggtg	cccagggtga	tcttgaactc	ttggacttga	gcggctcctc	cgtcttggcc	7800
tctccgtgtt	ggggttacag	acgtgagcta	ccacacctag	ccccccccc	cctttttttt	7860
tttttttaaa	gagtcaagg	ttcactgtat	taccagctct	ggagtgcatt	ggcagttcac	7920
aggcatgatc	attatggctc	ttaacagcct	tgaactcctg	gcctcaagg	atcttccttc	7980
ctcagctctc	caggtagctg	ggattaatag	gcactctcca	ctgcttccgg	ctccagaaat	8040
cttcatttta	atgtagtata	tcaattttta	aattttgaca	actgttaatt	tactttaaaa	8100
aatgctatca	aatttgcagc	ctcattttata	gagatttctt	tgatcattct	cctttccccc	8160
tgcaaattta	attgctcagt	ctttgtgtat	ttctgtcatt	gcataatttt	caagctatta	8220
taaacaatgat	tctcatacaa	atagacattg	atacatatca	taaacttttt	tgaagtcctt	8280
gaaaaaatagt	ggaatgagaa	attgggattt	atatagtcag	tttaggccag	gtgcagtggc	8340
tcacgcctgt	aatcccagcg	ctttgggaag	ctgaggagg	cggattgctt	gaggccaggc	8400
cttcagacc	agcctggcca	acatggccaa	acgttgtctc	tacaaaaaat	acaaaaaatt	8460
agctgggcat	agtggcacat	gcccactctac	ttatggggct	gaggcaggag	gatcgattga	8520
gcttgggagg	tcagggttgt	ggtgagccat	gattacgcca	ttgcaactca	gcctgtatga	8580
cagaacggga	ccctgtcaca	ctcaaaaata	agaaaagaaa	tatagtcagt	ttaataaaga	8640
atgctgaaat	aaaattgcta	agatataaac	gtggttaata	tctacagg	tatttaact	8700
gtagcttttt	ggataacctc	tactgactgg	acagaaaaaa	tttattttac	cgtagtagtt	8760
ttctgtaagt	ttacttttaa	atttgtagag	ttataaaactg	cctgggcctt	aattgaaatt	8820
agaaataaaa	caattagatg	acctcagggtg	agcctattac	aaaatgctct	tgtcataaca	8880
ttaaaagtca	tacaattgat	accttatttc	aggttttgaa	taattcattt	gaaacatgtt	8940
aattttttata	ctattagcga	ccaacctttt	tgtatcctct	ctttttgaaa	tattaatgta	9000
caggagtttt	cagaataatt	aacagattat	atagatctga	cttgaggcta	ggagtttgag	9060
accagcctgg	ccaacattcg	caacgagtga	aacctcgtct	ctactaaaaa	tacaaaaaaa	9120
caaaacaaaa	cccccaaaaa	cagattatat	agatctgtat	ttttgccctg	ttctcatttg	9180
agcactagtt	ccatattgtc	ttcagtagag	ttctattaga	acttggatct	aatgtgtcca	9240
cagtatatgt	ccaataacag	aagcataaga	cacatgtaga	ataaatcagt	aggagtacta	9300
tttgctttac	taagtgggt	tttgaagttt	aaaggagttt	cagatacaaa	aagaaaaaac	9360
cagggtggagt	gaccattgta	tgctggctta	gggcttgagt	ccagggtgtt	gccagtgacc	9420
agatgtttgt	aaccaacctc	tggtgtcttc	ccccctgccc	caactttaac	acaactgaag	9480
tattgtctgac	acagttat	tcataaaaaa	agtttgattg	ccgggcgcag	tggttcacgc	9540
ctgtaatccc	agcacttttg	gaggctgagg	caggcggatc	acgaggtcag	gagttcgcga	9600
ccagcctggc	caacatagtg	aaaccccgct	tctactaaaa	atacaaaaat	tagtggggcg	9660
tggtggcacg	cgctgtagt	cccagctact	cgggaggctg	aggcaggaga	atcacttgaa	9720
cccgggaggc	ggagggtgca	gcaagtcgag	atcgtgccac	cgcactccaa	ccggtcgaca	9780
gctcgagact	ccgtctcaaa	acagtttcat	catgtttctt	ctatgtttga	aaatgtaaat	9840
tacttcatgt	tgccaacata	cagacttcat	tttcttggca	taggagcttt	tcagtttccc	9900
tgtgcttctc	agttttctgca	gtcatgtttt	tcacacctta	ctgttcattg	aaaatagagt	9960
cctttactgt	tgtgtcctgc	tccccattca	cgattatcct	tttcttccac	ctctgtctgg	10020
ccaaatgcta	catttttctt	tagacataac	tttctccttc	attccaacaa	tataactgtt	10080
gagactgttc	tagtccagga	gggtctcctt	atcttagaag	tttgcttcta	tctgttcata	10140
caggatgca	gtcctgtcat	gttctgtatg	gtaaatctat	gggtggcttg	tctctgtttc	10200

acctggaaga	cagtaaacca	cttttcaaac	ttagtgtcac	atatagtgtc	tcctatagaa	10260
ttaaaaaaaa	tgtgtctcat	gagtcaatat	gtttttgtat	ttgtagacct	gaaagatgtc	10320
tgaaaattcc	agtgacagt	attcatcttg	tgggtggact	gtcatcagtc	atgaggatg	10380
atatttaata	ctttttataa	ggtaatttgt	aatattaatg	ttaccagtga	tgtaaactgt	10440
gttctttgaa	gatcagtcct	tttctacctt	taagcaaaaa	gttccaatgg	acattttccc	10500
tctcatatta	aacttccactg	ctgaaaacgc	ttcatgagcc	agcatcttct	acattattgt	10560
acatagcttt	gagacattag	gcaaataatt	attgaagggt	tgttatttgt	caggccctgt	10620
gctttacttt	cattttcata	taattttgtc	tttttttttt	tcagctcact	tgagacagag	10680
tctcactctg	ttgcccaggc	tggagtgcag	tggcgtgatc	agtagctgga	gcaacctccg	10740
ccccactgga	ctgaaatgat	tctcctgcct	cagcctcctg	gacgagtttc	attacagggtg	10800
cctgctacca	tgcccagcta	atttttgtat	tttcagtaga	ctcggcttcc	accatcttgg	10860
ccaggctgat	cgtaaactcc	tgacctcgtg	atccatctgc	tttttttttt	caacatgctg	10920
ggcttacaga	tgtgagccac	tgtgcctggc	caattttgtc	gttcacatgt	tttaaaggga	10980
caggatcttg	ctctgttgcc	caggctagag	tgcagtggct	ccaagtagct	gcaatcatag	11040
taccatgtaa	cctttaactc	cttgggctca	agtgatcctc	tttactgtg	gggactatag	11100
gcatatgcca	ccataccctg	ttcttaaata	attttgaata	agaggttaag	atacatactg	11160
ttttcattct	tattttatag	ttgagaaaac	taaagcttag	atcagaaaagg	taatttgggtc	11220
aagattatgc	agctagaaaa	tagatcctgg	atttgaacag	aaaggccaga	agaatggaga	11280
acatgtgttc	catttacgtt	atagcagaac	ttcacaggga	agtatacata	accctatcac	11340
aaaatgaatt	ttataataga	agattgatat	acatacaaca	gaaaaatggc	acttgtacat	11400
tttgtttatt	ttttcatacc	agtaatatat	gttctactgt	taatggacat	agtatatattga	11460
taaacagaaa	tatacttact	ccagggtttta	ctccagggtt	tttttttctt	ctataatttt	11520
cccatattgt	tttaggggat	tgtaagcctc	acttgttttc	ttgtacagt	ttttgagatg	11580
gagttttgct	cttgttgtcc	aggctgtcgc	tcttgttgtc	cctgcctcag	acgcaatctc	11640
ggctcacagc	aaccttcgcc	tcttgggttc	aagccattct	ttgtattttt	cctctggagt	11700
agctgggat	acaggcatgt	gccaccacgc	ccgactaatt	cgccagggtga	agtagagacg	11760
gggtttctct	atgttgggtc	ggctgggtct	gaactcccga	gtgcccgcc	tccgcccgc	11820
tggcctccc	aaagtactgg	gattacaggc	gtgagccacc	aattccagca	acttgttttt	11880
ttataaaaa	ttataggccg	ggcgtgggtg	tcacgcctgt	cagcctgacc	ctttgggagg	11940
ccgaggtcgg	ggcagatcac	tgaggtcggg	agttcgacac	ggcgcacat	aacatggaag	12000
aaacccggtc	tctactaaaa	atacaaaatt	agccaggcgt	ctgggaggcg	gcctgtaatc	12060
ccagctattt	gggaggttga	ggcaggacaa	tcgcttgaac	agagtgaaac	gaggttgccg	12120
tgagcagagt	tcgtgccatt	gcactccagc	ctgggcaaca	ttagttaagg	tgtctcaaaa	12180
aaagaaaaaa	aaaattaaaa	aattttttgt	ttttaaacta	tttctgcatt	ttcagggtagt	12240
tatgtttaga	aaacattaac	agaaaaaac	aagattgcct	ctttttaaaa	aaaatttcaa	12300
aattttaaag	catctatcat	ttgagattga	gatgattcct	aactcccata	tcttcagtga	12360
cttttctatt	tttagcttgt	tttcttcaaa	ggattagatc	ggagtcttac	gcaacttctc	12420
cttcaaggat	aattaacaat	ataggagcaa	ggcagctatg	gtcaagtgtg	ctgttagtgt	12480
gcagggtgga	gtatgacagc	agacctctgt	ctggcactca	gtacttttat	tcattagggg	12540
gttctgtact	ggatgttatg	tcccagattg	aatcatattt	ctcttctctt	ctctctctct	12600
ctatatctgc	tttccagggt	ctactctttc	ttgctaattt	gttctcccag	tgtctccttt	12660
tcctctccca	ttactgccat	tctcattttg	gccagaattg	atagacaacc	caattccctaa	12720
tacataacct	tgctttagcc	tctaccattc	tcctgccact	tttttcttta	tcggagtctt	12780
gcattccgaa	ttctcattag	ggctcaactt	aaacgctact	agtggcagga	ctttttcttt	12840
tttgagatgg	agtcttgctc	tgtcgcccag	gctggagtgc	tcagcctctg	tctctgctca	12900
ctgcaagctc	cgcccatcgc	gttcacgcca	ttctcctgcc	tgtattttta	gagtagctgg	12960
gactacaggc	gcccggccacc	acgctcggct	attttttttt	ctcgtgatcc	gtagagatgg	13020
ggtttcaccg	tgttagccag	gatggtctcg	atctcctgac	cgggccctac	gcccgcctca	13080
ggctcccaag	gtgctgggat	tacaggcgtg	agccactgcc	agagaatgca	ttttttcatg	13140
aattctttta	atttttgctg	tcttgagtta	tgtatacgca	acggaatcac	gacctttcga	13200
ttccatgtgt	cagcagacta	tagtggggac	atagggaaag	atccgctatt	cttagtggtt	13260
aaactttgtt	tacaattaag	acacaaagaa	aaattgtatg	aaaaagatag	attaatgaaa	13320
agacagtctg	acatcaaagt	aggaaagata	acctcagaat	ccatgtcatt	tctaaaattg	13380
tgtgaggaga	gtattcatta	accctatagg	tttatttaat	atatgggtgt	aaagcttttag	13440
ccatttttag	tttatagtgc	cataataagt	agttattttg	ttttttgaga	ttctctgaat	13500
atgttgtaaa	attgaatttt	ggatttcatt	tttttttttt	gggattacag	cgggaattttg	13560
ctttttttgt	gatccaccgg	cctcagcctc	ccaaagtgtc	tctagcgaag	gcgtgagcca	13620
ccgtgcccag	ccagatttga	attttttata	tcccacagca	agaaataacc	tgcttgtgtc	13680
agagtagttc	cataaatgtt	aagtagaaac	aaattattat	aaatagagca	aaatttagac	13740
ccttattctc	tggaaattcaa	atttattgtc	tgagctcata	tgccattttc	ttccactttt	13800
gggctgacct	gacttagaat	ttaaacctga	gactccattg	ctgccatagg		13860

cctttgtgga	ctaaattgaa	caaaagcttg	tctaattaga	tactgttcct	ttggagtatg	13920
gcagcatctg	agacttttaa	taatggaaga	agcattttaca	tgtagtcaaa	tctagctttg	13980
aggagctaata	aggcaaataa	ctgaaagatt	atcacttttc	cttaggggtc	agatatagaa	14040
atgttgaatt	ctgtgacccc	cactgacagc	tgtgagcccg	ccccagaatg	ttcatcttta	14100
gagcaagagg	agcttcaagc	attgcagata	gagcaaggag	gtaagttggt	cacaaattct	14160
aatttttttt	ttaatatgat	atatgagtgga	tattatgagt	cttgcccttct	ttccagggtg	14220
gtggccctttc	tggctaattct	aaggggtcgt	tggaggatta	gaacttcagt	gtaggttggg	14280
cacagtagct	cacacctgta	atcccagcat	tctggggaggc	tgagggtgggc	ggatcatttg	14340
aggtcaggag	ttcaagagca	gtctggccaa	catggtgaaa	ccctgtctct	actaaaaata	14400
caaaaaatta	gccgggtgta	cttgagggtg	cctgtaatcc	cagctactca	gaaggctgag	14460
gcaggagaat	cgcttgaacc	tgggaggcgg	agtttgagct	gagccgagat	tgtgccattg	14520
cactccagcc	tgggcaacag	agtgagactc	cattttaaacc	aaacaaacaa	agaaaaactt	14580
cagtgtggat	ttggtgaagg	cccacagaac	ccagagtcac	cagcctgccc	caggggttta	14640
tttgcagctg	tagtatattt	ttgggttttc	agatacactt	tgttgctaca	gaggtaacca	14700
gtgacaaaaa	aagtgtttca	tgggtttaatc	tgaatttggt	tggtagtttc	tatttccttg	14760
tcatttggtt	ggtagtttgt	atcttacttg	cattattaaa	gttaagaaaa	aaattattca	14820
ttgatcacaa	gagatttact	aacctgtttt	ccagttatta	tcagtgtgat	ggagttacag	14880
acatgcctct	cattttattc	tgctttgctt	tattgtactt	cgcagatact	acatttttta	14940
caaattgaaa	gtttgtggca	accctgtgtt	gagcaagtct	attaatgcca	tttttccgat	15000
agcatatgcc	cacttcagt	ctctgtgtct	cattttttata	attataatat	ttcattttatt	15060
tttattttat	tttattgaat	tgaattggcg	gagtttcgct	cttggtttccc	atgctggagt	15120
gcaatgggtat	gatcttggct	cactgcagcc	tctgcctctt	gggttcaagt	tatcctcctg	15180
cctcagcctc	tcagctggga	ttacaggcat	gcgccaccgt	gccagctaa	ttttgtgttt	15240
ttaatagaga	cggagtatca	tcagtgtggt	tagcctgggtc	tcgaactcct	gacctcaggt	15300
gatccacctg	tgtcaacctc	ccaaagtgtc	gggattacag	gcgtgagcca	ctgcgcctgg	15360
cctgtaattg	tcataatttca	aacttttttca	ttattattac	atcagttatg	gtgatctgtg	15420
atcagagatc	tttgatttta	ctattgtaat	tcctttggga	caccatgaac	cgtgcctatg	15480
aaagacagt	aacttaataa	atgtgtgtgt	tctgactgct	ctactgactt	gccattcccc	15540
catctctctc	cctctccttt	ggcctccctg	ttcctggaga	caacaacaat	attgaaatca	15600
ggccaattaa	taaccctaca	gtggcctcca	ggtgttcagg	tgaaaggaag	agttgtgtgt	15660
ctctcacttc	aaatcaaaag	ctaaaaatga	ttaagcttat	ttgaggaagg	catgtcaaaa	15720
gctaagtctc	ttggggccaga	tagttagcca	agttgtgaat	gcaaaggaaa	agttccttgaa	15780
ggaaatttaa	agtccttctt	agtgaacaca	tgaatgataa	ggaagccata	tagccttatt	15840
gctgacatgg	agaaaaattt	agtggtcttg	gtagaagatt	gaaccagcca	caaaattccc	15900
ttaagccata	gcctaattcca	gaacaagtc	ttcctaactt	gcttcaagtc	tatgaagggt	15960
aagagtgggt	aagaagctgt	agaaagaaa	gcggaagcta	gctgagggtg	gttcatgagg	16020
tttaaggaaa	gaagctatgt	ccgtaacata	aaagtccaag	gtgaagtagc	aagtgtctgat	16080
gtagaaggcg	caccaagtta	tccaggagat	ctaactgaga	taatggatga	aggtggctac	16140
cccaaccagc	agattttcag	tatagatgac	acaactttct	attggaagaa	gatgccatct	16200
aggactttcc	taactacaga	gaagtcaata	tctgcttcta	ggcttcaaag	aacaagctca	16260
ctttcttggt	agaggcaa	gtagctgggtg	actttaagtt	gaagccagtg	tttacttacc	16320
atgccttgag	aaatcctagg	acccttaaaa	aatatgctac	atctactctg	cctgtgctct	16380
gtaaatggaa	caacaaagcc	taggtgacag	ccatgtgttt	acaacatgg	ttactgaata	16440
ttttaagctc	agtgttgaga	cctgctgctc	agaacaaaaa	gattcctttc	aaaatactag	16500
acattgtata	gcaataacctg	gtcaatcacc	gaagggtctc	gatggagatg	tacaaggaga	16560
ttcatgttac	tttgtttctt	gctaacacaa	catccagtct	gtagtccatg	gatcaaagag	16620
tagttttgac	tttcagggtg	tattatttta	taaatacatt	ttgtaaggct	gtagctgcta	16680
tagatagtga	ttgttctgat	ggatctgggc	aatgtgtgtg	aattgaaaat	cttcaggaaa	16740
ggattcacca	ttctagatgc	ctttaagaac	aattgtgatt	tgtgggaaaa	ggtcaaaaata	16800
tcaacattaa	caggagtttg	gaagaagttg	atcttcaacct	tcagtacttt	gagtgggttca	16860
agactttaat	ggaggaagga	actgcagatg	tggtagaagt	agcaagagaa	ttagaattag	16920
aagtggatcc	tggtcgggtg	cggtggctca	tgcctataat	cccagcactt	tgggaggctg	16980
agggtggcg	atcatgaggt	caggagatcg	agaccatcct	ggctcacacg	gtgaaatccc	17040
atctctacta	aaaatacaaa	caattagctg	ggcgtgggtg	caggcgctg	tagtcccagc	17100
tactcgggag	gctgaggcag	gagaatggcg	tgaacctggg	aggcggagct	tgcagtgagc	17160
caagatcgcg	ccactgcact	ctagcctggg	caacagagcg	agactctgtc	tcaaaaaaaa	17220
aaaaaaaaaga	agtggatcct	gaaaatgtga	tccaattggt	gtaatctcat	gataaacttg	17280
aacagataag	gagttgcttc	ttatggatga	gcaaagaaag	tagtttcttg	agatgcaatc	17340
tactcttggt	gaagatgctg	tgaatattat	tgaatgaca	acagaggatt	tagaatatta	17400
cacaaactta	gttaataaag	cagtggcagg	gtttgagaag	attgactcca	attttgaaag	17460
ttgttctact	gtgggcaaa	tgctatcaaa	cagcattgca	tgctacagag	aaatctttca	17520

tgaaaggaga	gtcaatccat	gtgggaaact	tcagtgttgt	catacttcaa	gaaattgccc	17580
cagctactcc	acccttcagc	agctaccaca	gtggtcagtc	agcagccatc	atctttgaag	17640
taagactctc	caccagcaaa	aatattacaa	ttcactgaag	gctcagatga	tcactagcac	17700
tttttagcaa	taatgtat	ttaaattaag	atatgtacag	tttttagac	atgatgttat	17760
tgcacactta	atagattaca	gcatagtgt	aacctaaact	ttacatggac	agggaaacca	17820
aaaaattcat	gtgacttgct	ttattacatt	ggtttggaa	tgaacttgca	gatatactgag	17880
atatgcctgt	actctgggtc	caatctggta	aaatggaatt	tgactactgt	attgcatctg	17940
tattatgtat	acttcacatg	ggatttgatg	cacacattat	ttatatagag	aaataggact	18000
cctgaacaat	tactgcatac	acttatgttc	gtattttaat	tacttcatta	actttttaa	18060
aaaattacag	taaaatgcat	acagaacatt	tccctcagg	agaaaaagt	ggatgtgtca	18120
aggccagaaa	tagaagagat	tatagctgtt	aattttttta	agcctacacg	ttgattatta	18180
ctactctcat	ttgaaaagt	attctcatct	tttttgtgtc	agagatcctt	ttgagaatct	18240
gaaagctatg	gacagtttct	tccaagaaat	gcatttactt	gcatatgtta	aagaaaattt	18300
tctttttttt	ctttttcttt	atgagacaga	gtctcgcact	gttgcccagg	ctggagtgc	18360
gtggcacaat	gatctcagct	cactgtaacc	tccgcctccc	tggttcaagt	ctcagcctcc	18420
tgtgtagctt	ggattacagg	tgccctgcc	tatgcccagc	tatttttttt	ttatttttta	18480
tttttagtag	agacgggggt	ttcaccatgt	tggccactct	ggtctcgaac	tccctgacct	18540
ctgatcagtc	tgccctcgcc	tcccaaagt	ctgtgattac	aagcatgagc	cactgtgccc	18600
ggcctaattt	ttttgttttt	tgagatgggt	tcttgctctg	ttgccaggc	tgaggtgcag	18660
tggcgggagc	tccgctcgct	gcaagctcgc	cctcccgggt	tcacgccatt	ctcctgcctc	18720
agcctcccaa	gtagctggga	ctacaggtgc	ccaccaccac	gctcggctaa	tttttgtat	18780
tttttagtag	gacgggggtt	cactgtgtta	gccaggatgg	tcttgatctc	ctgacctcgt	18840
ggtctgtccg	ccttgccctc	ccaaagtgt	gagattacag	gcgtgagccg	ccgcgcccgg	18900
ccattttaat	agcgacggga	tttactatg	ttggtcaggc	tggctctgaa	ctcctgacct	18960
cgtgggtctgc	ctgcctcagc	cgctcaaagt	gctgggatta	caggcatgag	tcaccgcgcc	19020
tggccccagc	accccggccg	agtactgtgg	cggaaatctca	cctctaaatt	aattaatatt	19080
ctgttagag	gtatataatg	ctgaaaaata	cctgttcttt	gcaggactta	19140	
aaattacata	gaaatgcatg	atcgaccggg	cgcgggtgct	catgcctata	atcccagcac	19200
tttgggtggc	cgaggcgggc	ggcttacggg	gtcaggagat	caagaccatc	ctggctaaca	19260
cggtgaaaac	ccgtctgtac	taaaaataca	aaaaattagc	cgggcgtggg	ggtgggcgcc	19320
tgtagtccca	gctacttggg	agcctgaggc	aggaggatgg	cgtgaaccgc	ggaggcggag	19380
cttgacagtga	gccgagacgg	cgccactgca	ctccagcctg	ggcgacagag	ggggactccg	19440
tctcaaaaca	aaacaaaaca	aaaaaaaaac	aaaaagaaat	gcatgttcat	gatagggaaa	19500
aaaaaatagt	aagcaaaaga	aattttaa	ggtctataat	tcttttatct	agaaataatt	19560
actgttgata	tttgggtgtac	tttgctcata	aatttatatg	ttatattatt	tttaactttt	19620
cctaataatt	tatgctcttt	tctttttttt	ttttttaa	acagagtttc	actcttgttg	19680
cccaagctgt	agtgcaatgg	catgatctcg	gctcactgca	accttcgcct	cctgggttca	19740
agcaattctc	ctgcctcagc	ctctggagta	gctgggatta	caggcgcgca	ccaccacacc	19800
tggctaattt	tttgtatttt	tagtagaaac	ggggtttcac	cgtgttagcc	aggctgggtc	19860
caaactcctg	acctcaggtg	attcacctgc	attggcctcc	caaactgctg	ggattacagg	19920
tttgagccac	tgtgcccggc	ctttatgctc	tttttcatta	aaaatatatt	gtgaagtcat	19980
cattctgttt	gtacacattt	tctttgagga	ggttcttata	aaatatatct	tctgtagtga	20040
catttagttt	ttctgtgttt	tgagttcttt	cttttttaa	aaaaattatt	ggtagaactg	20100
gtctcgctat	gttgccctagg	ctggttttga	actcctggct	ttaagtgatt	ctcacacatt	20160
ggcctaccac	agtcctggga	ttacaagcat	gagccactgt	gcctggactg	ccctctctct	20220
gacttttttt	tgagacatag	tcacactctc	ttgtccaggc	tgaggtgcag	tggeatgatc	20280
atggctcact	gcagcctcaa	ctcctaggct	caagtaatcc	tcctgcctca	gctttctgag	20340
tagctagtac	tataggcaca	taccaccatg	cccaaataat	tttttaattt	ttatttttgt	20400
agagacaggg	tcttgctgtg	ttgccaggc	tggctctgaa	cttgtagcgt	caagcagtc	20460
tccagccttg	gcctcccaaa	agtgcctagg	tgacagggtat	gagtcactgc	acccgcctg	20520
agtccttggt	ttttatagtt	tatgttttct	tataaggcat	ttagacacac	acacacacac	20580
acacacacac	acacacgtac	atatacatat	atactttcat	aaatcatagt	ttgaagccac	20640
ggttttttat	cttacggtac	caggcatatga	cagccattag	aatggctctt	agaaactctg	20700
aataaacttt	taagaattca	ggaaatgtat	cactaggat	ctaagtatag	attttttcat	20760
attaggtatt	aatgaacata	ctggatcaag	taatttggt	atgtaaggta	gagggtttat	20820
ttacttagtc	aaggtagctt	tgagttctta	ataaatcttg	tggctgggca	cgatggctca	20880
tacctgtaat	cccagcactt	tgaggaggca	agggtggcgg	atcgcttgaa	gtcaggagtt	20940
cgagaccagc	ctgggcaaca	tggtaaaacc	ctatctctag	tagaaataca	aaaattagcc	21000
gtggcgtatg	tctgtaatcc	cagttgctta	ggaggctgag	gcaggagaat	cacttgaacc	21060
caggaggcag	aggttgcagc	gagccaagat	agtgccactg	cactccagcc	tgggcaacag	21120
agcaagactc	catctccaaa	aaaaaaaaaa	atctttaatg	attgcatttt	cttatccaaa	21180

attatcacct	gacagtttca	aataaatgaa	gttcattagc	aacagtggag	tgacttctat	21240
aattgtatgt	gacatttcat	taaatctatc	ctaacatatt	aggaagagat	ttttatctac	21300
ccagattata	tgttggctgc	agaaagtcaa	cagagagttt	taaattaaga	aataattata	21360
ttgatctttg	ctttatatca	gaaagcagcc	aaaatggcac	agtgcctatg	gaagaaactg	21420
cttatccagc	tttgaggaa	accagctcaa	caattgaggt	aaacttggtat	tttacctgt	21480
ggatatatgt	taaatagtat	ccttagaata	ctattttaag	cctctaattc	tatttatgca	21540
ttctattcct	attttgaatt	ataagcaatt	ttgacttcta	agttagatgt	cttagaggac	21600
atctaagcaa	agtattttat	tggtattgtg	ttaaagatct	atcttttcac	ctctaataata	21660
attctttttg	gaagtagatt	gcattcttga	attatatatg	aaaattaaac	tgttagggtt	21720
catgtctaaa	atgggtggtc	attttaaaat	ttggtaacaa	cctgagactt	atgctttggg	21780
gttttacttg	acttctgtat	aaaactagat	agctagatga	tcattttaca	tggtgtttta	21840
gtctgtttgt	actgatctga	caaaatacct	gatactgggt	gatttataac	aaacagaaat	21900
ttattttctca	cagttataga	ggctgggaag	tttaagatca	aagtgtggac	aagttcagtg	21960
tttgctgatg	acatgctgtc	ttgtttccaa	atggcatttt	gttgctacat	ctttaagagg	22020
agatgggcaa	aaaaaggctg	gatgctgcat	gaagcctggt	ttataaagac	cttaatcata	22080
ttcctagggg	aggatccctt	ataactcagt	cacctcctaa	aggtccact	tcttagtact	22140
atcacattgg	cgattacatt	ccagcgtaga	aatttttggg	gacaccttca	gatacattca	22200
gtacaagata	cagctgttga	agtttattac	gtacataacc	taaaaagttc	agtgagtcct	22260
ttttgggctt	ccacactaca	gagttgtgct	cgaatagaac	catggaactc	gtgagagaag	22320
tgagctcttt	tttctgtggt	tattgagggg	gcaaagatgg	gcttctcagc	ttctgcagcc	22380
cactaggaga	atgcagtggt	ttgatctaat	ctcgagagtt	gtcaagggat	ctgatgggtg	22440
tctcaagcta	tatgatgagc	ctgctattgc	ataattcttt	actaatagta	ggaatcatat	22500
cttttatttt	aactcagatg	actataatac	ttactactgt	tgtattctaa	gaaaatgtaa	22560
gacctttaa	tgattgttga	acttaccatc	tctaaaatta	tgattcttca	ggcagaggaa	22620
caaaagatac	ccgaagacag	tatctatatt	ggaactgcca	gtgatgattc	tgatattggt	22680
acccttgagc	cacctaaagt	agaagaaatt	ggaaatcaag	aagttgtcat	tgttgaagaa	22740
gcacagagtt	cagaagaact	taacatgggc	tcttctctca	gcagccagta	tactttctgt	22800
cagccagaaa	ctggtaagaa	tacactgata	agagacttaa	agacatgtac	gaccacattt	22860
tatataaagg	cttgctttct	accctaata	atttagtctc	tagttttgaa	tatgtttggg	22920
taaaactcaa	gacaagacta	tttttgtgtg	tgaaatctat	taatacctag	tgtttcgcta	22980
gactgttctg	gagcatagca	atcttttact	gtaacagtaa	ccatcttttg	ccattaaata	23040
gaagacaaaa	ttgcttcagt	gagatttgtt	aaaatcacaa	atgctccaaa	attcttttgg	23100
tgcttttttag	atctttaaga	gtgggagatt	ggggatgtta	atatttttgc	ttgcagtagt	23160
gtacattttg	taatatagaa	atagtgaana	aaattgttat	taaagtctct	tcagatatat	23220
tcaattatta	atcatgcaac	aaacatttat	tgagtaccta	ccatatgtga	aacagagttc	23280
aaggtgctat	caatacacgt	agtcttccaa	agctcgtgac	cttcagatct	tttgttttag	23340
tattctgttat	gaaaatgtca	ctagtgtgag	ccacattttt	aatgcaatca	atgccgcttg	23400
tacagacaga	ctcattcaga	gattaaagtg	tgagttgctt	gatttctttc	tgctatgctt	23460
cagctcagtt	ttagcagtat	gtataacatc	ttttaatgtg	atgtaagtat	gtaggtataa	23520
agttcctgga	tatatcagtt	attaaccac	aattataact	aagcgtgagt	tatggcagag	23580
acaacttgaa	acactgctag	tgattctaaa	aatttcttaa	tttgacgaag	aaacaggaaa	23640
caggtagtat	ctattttaga	taattttttt	agattttacc	attctttaat	atttacattt	23700
gccaaccaga	atcagacaat	agaatttctg	tcattccagt	ttaagcta	aaaatgtcaa	23760
gtagaggttc	ttggctgggc	atagtggctc	atgccagtaa	ttccagcact	ttgtaaagct	23820
gaggcaggtg	gattacctga	accagagatt	tcgagaccag	cctgggcaac	atagcgagac	23880
ctcatctcta	caaataataa	aaagccaggc	atgattggcg	gcgcagtgtg	tcccagccac	23940
ttgggaggct	gaggtgggag	gattgcttga	gcctgggagg	ttgaggctgt	agtgagctga	24000
gattgcgcca	ctgcaccag	attgccaacc	tgggtgacag	agcaggatcc	tgtctcaaaa	24060
aaaaaaaaaa	aaagtagaga	ttcttggcta	tctcatttaa	tgagaagtta	ttttcagtta	24120
gtatatcagt	ggtttgcccta	taaacaatgaa	cgtgaaaaca	ctttttccag	ctatttgaat	24180
attcatgtga	cattcttgat	gttcagagga	aaacttcagg	ctttgttaga	atagcattca	24240
tagtatcttt	atttatggag	gggtattgta	attgatttta	gaatccttgt	tagtcatcaa	24300
attttattat	tattttttta	aactccagga	tttgtgttgt	attcaggtag	tttccccacc	24360
cccgttctct	ttcctgcctc	tggtttaatt	agagaatatt	catggccag	aaaagtcaaa	24420
ttgaagccag	agtattatag	aatggtcaga	tatataagaa	actgacatag	acgtaaaagg	24480
aactacatac	tgttgtggtg	cgtgggtggc	cagcctgta	atcccagcac	catctcaaaa	24540
aaagaaagaa	attacatatt	aacttttttc	aggaagtgtg	atagttctaa	gaccattctt	24600
ctaataattta	tcttctttct	gaattctgac	ttcttgagat	ttttgtggac	taagaggaa	24660
atttgattaa	ctgtattttt	accattgtgt	attctctcta	aagatattgt	ttcaataaac	24720
caaatgttta	aagacgaaat	tttggactat	actgaaaaca	ctgcatataa	accagttgcc	24780
aaaagttttt	gttttggggc	cgggcacttt	ggctcatgcc	tgtaatccct	gcactttggg	24840

agactgagggc	aggcagatta	cctgaggttaa	ggagtttgag	accagcctga	ccaacacggc	24900
aaaaaccctt	ctctactgaa	aatacaaaat	ttagccaggt	gcctgtaatc	ccagctactt	24960
gggattagct	gcctgtggta	gcgcaggcct	gtaatcccag	ctactctgga	ggctgaggca	25020
ggagaatctc	ttgaaccag	gaggcggagg	ttgcagtgag	ccaagattgc	gccactgcac	25080
tocagcctgg	gcaatagagg	gagaccccg	ctcaaaaaa	taaaaaagat	ggtttttgtt	25140
tttccctttt	agtttggtta	ttttgtgcta	gccattgctt	aattttgttt	tttcccttcc	25200
ctttcttcat	ccttaaggat	ttcaacttca	attttttctt	ctcctgactt	atattcttgt	25260
ggcagtgtac	gttttggttg	gttaagaaca	ctgcctgctt	cctctttatg	aactctcttc	25320
cctgacaaaa	agcaaagttg	gtagtgtaga	gaagtttgta	ttgtgtgttt	ttaagaaggc	25380
atggttatta	cgttttaatt	ttgtacggat	aacaatgtta	agtgataatt	aagtattttt	25440
aattcttttt	tttcttttta	gtctttataa	tatagcttta	tgctctttt	tttctgtttt	25500
attcacaaaa	gaaaggtggt	gggagaagct	gtggaagatt	cctgagtga	tatggggatg	25560
ggatgatcag	ctgaaacacc	atgttcttag	ccaactcgct	ttccaagggtg	gtgtgactaa	25620
atctgaccag	cttctctaga	gctgagtggt	cctagtcaca	tttactat	accgagtgc	25680
ttaaagatac	ctgttgatc	ccgcaatact	ctaaacaggt	gttcagaatc	tcttgtaaag	25740
gagctggcca	agcttattgc	atgcctttgc	attgcttgca	tctatggg	aaattaagct	25800
tttttaaaag	aagttaaaaa	tcaaaatatt	tcagctatta	tatgtatggg	ttaaaaaagt	25860
tggaaagcatt	agataaggac	atgaatat	taatgtgggt	taggctgttt	tgtagaata	25920
tataatgaag	gtaatgttaa	tgtagaattg	aacaattatt	taaataagtt	ttacaaatgg	25980
tttgttttta	catttaccta	tcttaatttt	atgtcagaaa	gcctgactta	aatactctaa	26040
ccatgatcat	gaatgccttt	gtattatgta	atgctttgtt	taagtcttcc	tttctttctc	26100
tttgtccaag	aaatataatc	tcacacctga	ggcgacggca	tctttgaaaa	actagtgate	26160
aagaataacc	agataaacat	gatgggcata	agggtcata	ccaaaaagat	ctctcagtgg	26220
catctgtatc	actaaatatt	aggaatat	attcatttca	gtagtgcctt	ctgtctttgt	26280
gtttattgtt	gtaagtgtga	aagtgaactg	aatactccat	gatccatctc	tgaaaaatat	26340
tgccaaacct	aaatcaccag	ctttcctgtg	gcatggatat	cctgtcttct	gaagaactgt	26400
ttttgctttt	ctggagcatg	aatgtttgtt	gttttagagc	tctttgtatt	cgagttcata	26460
ttttactcct	atgttttagtg	cttttctctc	aagtacgttg	tggaaattat	ttctgagtaa	26520
ttgaagcttc	tgtgtcaaca	taatagtttg	ttgacataag	aaacagtgtt	aagaaattat	26580
gcatttgga	aaaactgaag	gtgatttttt	ccaggggaatt	tgtttctctg	acttgggatt	26640
tcttgtgcaa	attttcccca	ctagtttgtt	tttctctact	attattttca	taaaggagca	26700
gcaccagaat	agtccttaat	atcggagata	gctgttgtgt	cacttctctc	tgctgacata	26760
tttactagag	ggtaaaatta	ataaccttct	agtaagagtg	gcagtcgaag	ggaagggctc	26820
atctgacttc	tggaaacct	tgtaaaaata	cagtgccttg	aaccttgatc	atgggcta	26880
taggttgga	atgaaactag	agaccagata	caccaagga	aacttttggt	agttatttta	26940
ctttataagt	cacaggaat	gcttgtgtac	tttctgtgt	tccttaaata	gttgcactta	27000
aattacctct	ttgaaactga	atgaagagac	agagagtatt	tttttcttt	ccagaaataa	27060
tacttgttta	tacctgtaat	agcaatgaaa	ttttgtttct	tttgagacag	agttttgtct	27120
tgtctcccag	tctggagtat	agtggcagga	tctcagctca	ctgcaacctc	cacctcccag	27180
gttcaagtga	ttctcctgcc	tcagcctccc	aagtagctgg	gactataggt	gcactaccat	27240
gcccggctaa	tttttgatt	tttagtagag	aaggggtttc	gccatgttg	ccaggctgat	27300
ctogaactcc	tgacctcagg	tgatctgccc	gcctcggcct	cccaaagtgc	tgggattaca	27360
ggtgtgagcc	actgctcctg	gccagcaatg	aaacttgagg	ctatgcgaat	gaaggattgt	27420
totaagagtg	taaactataa	ggcgaggagg	attaaataaa	aaaacagaga	taggctctca	27480
aagcaccaaa	tagtatgatt	aacagattct	tgtgtatcac	atttgaaatg	ctttatgttt	27540
tggctttatg	ttgatgagtt	gaaaaccctg	gtttttgttt	atgttggttg	gtttttgttt	27600
ttggctatct	tatgtagaaa	ggcatgtaag	ggatggcatt	gattattcta	aataattttt	27660
actgggaaag	cttttccaag	attttgaata	gctaaatgtc	aacttttttc	ttaatagtat	27720
tttcatctca	gcctagtga	gatgaatcaa	gtagtgatga	aaccagtaat	cagcccagtc	27780
ctgcctttag	acgacgccgt	gctaggaaga	agaccgtttc	tgcttcagaa	tctgaagacc	27840
ggctagtgtc	tgaacaagaa	actgaacctt	ctaaggagtt	gagtaaactg	cagttcagta	27900
gtgggtctcaa	taagtgtgtt	atacttgctt	tggtgattgc	aatcagcatg	ggatttggcc	27960
atttctatgg	taagtactca	aaaatgtgtt	atacataacc	tgatgggata	gtgtagagga	28020
acttaagagt	gaggactctt	gggatctgtt	ttcagtgcca	ttattaaatg	tgtggccttg	28080
aaaacttgaa	gcctgttttg	gcctcagttt	tctcattcgg	gaagtgggtg	ctgcctatct	28140
cacaaagctt	tttatttaaa	taaggtagta	gttattaaga	aatgtaagga	taataaccat	28200
atatgtttgt	gactctttta	aagttaaaag	attggaagat	taaaaatctg	aatgctcac	28260
catgaggcaa	atcattttaca	tttagaatca	cacttaaaact	aagttgaagt	gtgactttat	28320
taggaagatt	atttaaatcc	cagttgaaat	agttacattt	gaaatgtgta	aataataagt	28380
gttcattatt	tctactttga	ggtttcatgt	aagtatcata	ctttgtaact	ttcattgttg	28440
cttctgtgat	tcacatgaat	tgagagtttg	tcacttttgt	tcttataact	tgctctttat	28500

tatgattgat	actgtttata	tatgttgatt	atcttatcaa	ttcaaagctt	ttaaatgcct	28560
tttgggtgag	aagaggaagg	tattctattg	gtgttacttt	actttttcat	ttaggagcct	28620
cacccattga	ctctctcctt	tggttttttg	agacggagtc	ccactctgtc	gcccaggctg	28680
gagtgcagtg	gcacaatctc	agctcaatgc	aaactccacc	cccagggttc	tagcaattct	28740
cctacctcag	cctccggagt	aactgggata	acaggcgccc	gccaccatgc	ctggctaatt	28800
tttttatatt	tgtagtagag	acggggtttt	gccatgttgg	ccaggctggg	ctcgaagtct	28860
tttttttttt	ttttcttttt	ttttgagacg	gagtctcact	ctgtcgccca	ggctggagtc	28920
cagtggtgcg	acctcggctc	aatgcagcct	ctgcctctgg	gttcaagtga	ttctcctgcc	28980
tcagcctcct	gagtagctgg	gactacaggc	gctgcaccac	acgcccagct	aatttttttg	29040
tatttttagt	agagacgggg	tttcaccatc	ttggccaggc	tggtctcaat	ctcctgacct	29100
tgtgatccac	ccgcctcggc	ctcccaaagt	gttgggatta	caggcgtgag	ccaccgcacc	29160
cagccagtct	tgaactcttg	acctaaagtg	atccacccca	ctcagcctcc	cagagtgcctg	29220
ggattatagg	catgagccac	cgtgcctggc	ctgagtctct	tatttaaggt	atgtgtttgt	29280
acaatgactg	gagtatttga	aacctgaact	ttgactctct	ttgctatatt	ggaatttggg	29340
gtagagacac	tttaaaagga	aatgtcttag	atcttgtcaa	cttcccaa	tttagcttgc	29400
tttacattaa	ctacttttag	atttttttgc	ctgcataatc	cacagtctta	acttttcgtt	29460
ttgctagttc	attcgaaaaa	tgtatttctt	atgcaaagat	tgaagaatta	catgtaccct	29520
atgtggattt	gtggaaaaag	tatattatct	aacatagcgt	aatgttagaa	taaactta	29580
gaagacaata	cctgtttaaa	gtcagagcct	gcaagatggt	tcttgtattt	atattaataa	29640
aaatatgtat	ttagatttct	gatggatacc	tgttgaatt	taatactgag	atactattat	29700
ttgtatcctt	tcttgaaatt	tgttgaata	agatttgatt	tgaatatata	atttaccttt	29760
atagactatc	tagctgaaac	aatcaataag	tatttgagta	tgattttccc	tccacaagta	29820
aacatgaggg	taacaatgga	gaagatctta	tcttaatctt	tttttcttac	ttcaaaaaaa	29880
attggatagt	gatttaaagt	gttaatccaa	attgcattaa	aacttcacca	ttacatgac	29940
ctttgaatat	tttgtagaaa	aataatttta	cagaagtgt	ttcaaaatga	gaagttactt	30000
ctctgttatg	taggattttg	gttatttagta	aaatttacct	taatagttaa	ttaataaaa	30060
attgtccttt	acttgatatt	agccttttca	ggcttagaaa	agcctggata	acataattatg	30120
aagtgcgcct	acatagta	gagattagtt	gaattaacat	acaagacctg	acctaaatga	30180
cttttccaag	tcactactta	aaagacatca	cttttttttt	ttttgagaca	gagttttgct	30240
cttgttgccc	aggctggagt	gcagtgcgtg	atctcggtc	accgcaacct	tcgcctcccg	30300
ggttcaagca	attctcctgc	ctcagcctcc	cgagtatcta	ggattacagg	catgcaccac	30360
catgtccagc	taattttgta	tttttagtag	agatgggggt	tctccatgtt	ggtcaggctg	30420
gtctcgaact	cctgacctca	ggtgatctgt	ccacctcggc	ctcccaaagt	gctgggatta	30480
caggcgtgag	ccaccgcacc	tggcaagaca	tcacattttt	taatttcagc	actgatctca	30540
acattctttg	gagttgattt	cagagccgtt	ttgaattttc	tattcacctg	aaagtcgggtc	30600
attgcatacc	atagtcattc	attcacttta	taattttatt	tttttttgag	acagagtctt	30660
gctctgttcc	ccagggttga	gtgcagtggg	atgatcttgg	ctcactgcca	cctccgtctc	30720
ccaggttcaa	gcgaccttcc	tgtctcacc	tcctgagtag	ctaggattac	aggcatccgc	30780
cagcacgcct	ggctactttt	tgtattttta	gaagagatga	ggtttcgccc	tgttggccag	30840
gttggctctg	aactcctgac	cttaagtgat	ccgcctgcct	cggcctccca	aagtgtctggg	30900
attataggcg	tgagccaccg	tgccctggcc	gctttataat	aatttaacaa	taccatatta	30960
ctaattgaat	cattctgcgt	ttgccagccc	tgggtgccata	cagatttgaa	ttggcagatc	31020
tatactgcag	ggaagagaaa	gctagcatga	ctaaggatag	tgaggcagtg	tactccaggt	31080
atttggttct	gaaaatgctt	ccagaagt	tattaaaaag	tttcatgaga	aagcagctct	31140
tcttattctt	acatttgctt	gtgactatca	acattccaaa	tcataaatgg	agttcaattg	31200
atttggtttt	ctcctcgagt	tgctttaagt	attgatagac	taccgggtc	ttcggcagac	31260
tattatataa	caagatatct	agatgctaag	ttatagagca	cagaatgaat	tacagctcaa	31320
agggtacact	tactgaatta	tcctggagg	ggtaagattt	aagttgtgtc	taatcatagt	31380
aagtttatga	tagactcaag	ggaagggtga	acattccagc	gacagagaat	ctgataacct	31440
gaggaagacg	taatcttggg	tttgggagca	gtgaaaagac	tgcttggaat	acagcagagt	31500
gtaggtat	agaaataatg	gaataggtgg	ggtgtctatta	tagtcatccc	ttgatataca	31560
tgagggatgg	gttccaggat	gcacccccat	acccaaatcc	atacgtacta	aagtccttgg	31620
actgcggaac	tcacatatat	gaaaagtcac	ctctccatat	acctggattt	tgcatcctgc	31680
catgtagttc	aaactcatgt	tgctcaaggg	tcaactgtgt	attgtaaaac	gtcttggaat	31740
ctagatagga	aagtttgatt	tattgagtaa	cctgtctatca	ggttagagaa	aaaagtgcgc	31800
gaactttttg	ctgggtgtgga	aaaggtggta	tggaaaaatg	tagaatagtc	agtcagttaa	31860
gagttctgta	atctggatat	ttgggtgagga	ggaccttgac	aatttgaata	acagtgggaa	31920
tgggaataagg	gacattgaag	gaataatgga	aaataatggc	aatttattaa	attgtagaaa	31980
atgtgctagc	tgttccactt	ttggagttgg	ggttactggg	gaagttttgc	cagatgataa	32040
atagatggta	agcacagt	ggtttggttt	tacccaaatt	tgttctagac	aaatttggtt	32100
tggggcaggt	ggtgaggttt	gatttttttt	ttttttccac	cctacaaaca	ggccccctac	32160

acagctggat	gtgttggtta	gaagctctga	tgagaagtta	ggacaagatc	tgtagcttgg	32220
aattcttaat	aggagtgata	gcaaaatctg	acagcgctgc	aacatggtaa	aatagggcagc	32280
attttagtag	atgactaggc	caaagattgt	atcttgagga	taagacttta	ggtagctgaa	32340
ggtgcaggaa	aaacccccaa	gtgattagtc	agtaaatattg	taaaaggcca	cattaagaca	32400
gtaatcaagc	atatgctata	ttatactatc	ttgaattcag	acctcaacac	agtttttagat	32460
tattttccag	tgggcaaagg	aattaatctc	agcagtttga	aatagaaatt	gcagaagttt	32520
tctgttactc	tgggaaactat	agataaattt	caacatttga	aaaaaatctg	ggattctgct	32580
gagtaatttt	gaaacaagct	tgccgtgctt	ctataaattg	agaaatctaa	agagaggaaa	32640
tgaattctaa	cacagaatat	catagctaga	ctatgtaaca	gttacctgta	aattggcaaa	32700
agttgttttt	gggtgttttt	aagatgtatt	gaagacattt	aaaataattt	ttatagcagt	32760
aagggaagaa	atagtgatca	ctgcacacct	tctttgtaaa	attctatagt	atctatactc	32820
agtagatgta	atgttaagggt	tgctaactgc	attttgcctt	atttttgatt	tcgtgggtttt	32880
ttcccccat	acatgaacga	tgatgaatagc	atgtctgagt	aaagtaacat	tttgattttt	32940
aggatgaaaa	tatgaagaat	cctagttgggt	ttaagattct	ttttttgaga	cggagtttcg	33000
ctcttggtgc	ccaggctgga	gtgcagtggtc	gcatcttgg	ctcaccacaa	cctccacctc	33060
ccgggtttta	gcgattctcc	tgccgcagcc	tcccgagtag	ctgggattac	aggcacatgc	33120
caccactccc	tggtctaatat	tgtattttta	gtagagacag	ggtttctcca	tgttggtcag	33180
gctggctctg	aactcctgac	ctcaggtgat	ccatctgctt	tgccctccca	aagtgcctggg	33240
attacaggcg	tgagctactg	tgccgtgcca	attcttttat	cactgttggg	ataaggacag	33300
tgctactcca	gtacagattt	aaccattgca	gaattcttaa	caaatttggc	cttgagaatg	33360
gtgcacaatc	accattagcc	aattattttc	tgtgctgtac	tttttgggct	ttgttgtatc	33420
cttaaggcaa	aatagt'aaaa	aaaaaaaaaa	ttttcatttt	tccttattga	cttacgacct	33480
gtgaaaaaat	accagggttt	gttcattttc	ctgtataagg	gaggctgaaa	cactttttgt	33540
acttaaaaga	taacccccaa	acaacaaagc	tgagtgcctt	caatatagta	agataagaac	33600
attacataaa	ttgttctctt	ggttagagcc	atatgggctg	gcctgtgtgt	tttaatacaa	33660
aagatagtga	actgcttaaa	tgttcttggg	tgtatgtaaa	taaatgtttt	taagaactag	33720
cctacttgcc	cttactttata	ttacgttaac	gttcaccacc	atttgatgaa	tgattgatca	33780
tgggctttca	tttacttttc	tttttttatt	ttattttatt	ttatttttta	gtagagacag	33840
ggtttcacca	tgttggccag	gctggctctg	aactcctgac	ctcaaagtat	ctacctgcct	33900
tgccctccca	atgtgctggg	attacaggcg	tgagccactg	tgcccagcct	cagttactta	33960
ttctctattt	atgtaatcag	aattttttaa	gaacggtgaa	atgctgatac	tctgaatgaa	34020
atgattgtca	agattacata	ggttatggcc	aggcacagtg	gctcacacat	gtaatccag	34080
cactctgaga	agccaagggtg	ggtggatcac	ttgaggccgg	gagtttgaga	ccagcctggc	34140
caacatggca	aaaccctgtc	tctataaaaa	attagttggg	cctgggtggcg	cttccctgta	34200
gtcccagaca	ctcgggaagc	tgagtcacga	gaattgcttg	aaccaggggag	gcagagggtg	34260
cagtgaagctg	agatcatacc	agcctgggca	atggagcaag	actcttctca	aaaaacaaaa	34320
aaaaaacaaa	aaaaagacta	catagcttat	atgcagatta	ccaatattaa	aaaatacata	34380
aaacatttaa	tgataaatatt	tttgttacat	acctttaata	aaaatattta	ttttaggcac	34440
aattcagatt	cagaagcgctc	aacagttagt	cagaaagata	catgaagatg	aattgaatga	34500
tatgaaggat	tatctttccc	agtgtcaaca	ggaacaagaa	tcttttatag	attataagggt	34560
atgtaccact	aacagtattt	aaaataattg	ttagtaatta	ttttgcttat	tagtttagagc	34620
ttattgtgct	tattagtgcg	gatttagtaaa	tcagtaataa	tgctgatcat	tgttgaattg	34680
agtacgggta	tttagtgtgt	cctagtcatt	gtcatgagtg	taccatatag	agtatttctc	34740
ttattctcac	aatatgtgaa	ttaagcaatt	actaactttt	atagggtggaa	aagagggtta	34800
gaaaagttaa	gtgactttct	caaggtagca	actggcagag	ctagtttggt	tttgtttggt	34860
tgtttattta	tttgagatgg	agtctcgctc	tgttgcccag	gctggagtgc	agtgggtgaa	34920
cctcagggtg	ctgcaacttc	cacctcctgg	gttcaagcga	ttcttgtgcc	tcagcctccc	34980
aagtagctgg	gattacaggt	gtgcacctct	atgcccggca	aatttttttg	tatttttagt	35040
agagacgggg	tttcaactatg	ttggccacgc	tggtcttgaa	ctcctgacct	ccgtctaccc	35100
acctcagctc	cctaaagtgc	tgggattaca	ggtgtcagcc	accatgctcg	gccatggcct	35160
ttttttgttt	tgttttgttt	tgtttgggag	agctaattaa	ttgattctaa	ggatttgact	35220
taagaactct	tatccctagc	tgctatttta	tagttaacat	cttttataag	tgacatttta	35280
tatgtgtata	tagacatttt	tattaacatt	attttcacag	agcgaagcaa	acattttcag	35340
ttggcaggag	ggaaagagga	gagttttggt	tttatagcct	ctctaagatc	ttctcttgat	35400
caggggacat	agctattcct	ttccattggt	tttttttatt	ctgatggaag	ggagagcatg	35460
ttatcttttt	ctgcctataa	ctcacctaga	tctcgtctca	caggactgta	ctgtccattc	35520
tgtcattacc	taacacctct	gtgggtttat	gaggatcagc	aaaatagctg	gtctcttatc	35580
tagttttttc	ctaagaagggt	tgtagagaga	aatgcagggt	agaaaaataa	gctatgtctg	35640
ggtgtgggtg	caacctctca	aattcccaaa	ggtggtaacc	ttgggaagcc	aaggtaggtg	35700
gattgcttga	gcccaggagt	tcaagaccag	cctggccaat	atgggtgaaac	cttgtctcta	35760
ctaaaaatac	aaaaatcagc	cgggtgtggt	ggcacatacc	tgtaatccca	gctttttggg	35820

aggetttaggc	acaagaattg	cttcaatcta	ggaggcagag	gttatagtaa	gctgagatca	35880
cactatttgca	ctccggcctg	ggccacagag	gaagactgtc	tcaaaaaaaaa	aaaaaaaaaaa	35940
aaaaaaaaaaa	ggaaaaggaa	agaaaagtaa	gctattgttt	tttccttcat	ttttccaccc	36000
ccaattctca	cacttaattt	atgtatgctt	cccttacagg	ttatatttct	tgaaaagaca	36060
aaaatactac	tttgtaacta	aattgtatct	ttcagggagg	tacttctccc	atccaagtac	36120
taaccaggcc	agaccctgcc	tagcttctgc	catcagagga	gactggcggc	atthaggggtg	36180
ttatggctgt	agacacaggg	aggtacttct	gaagttaatt	ataaatagtt	cagtttttcc	36240
tacctgtatt	agaagatgcc	attttcttct	tcaccacagt	gttttctggt	tccataggat	36300
aacattggct	tttggaanaa	tcaccacgca	ttaacctcta	gagagagttt	gtagtttggt	36360
ttgggtttgg	gttttttttt	tgttttgttt	gttttttttc	tgagatggag	cctcgctctg	36420
ttgccaggcc	tggagtgcag	tggcatgac	tcagctcact	ggaacctctg	cctcctgggt	36480
tcaagtgatt	ctcctgcctc	agtctcccaa	gtagctggga	ttacaggctc	cctccaccat	36540
gcccggttca	ttttttgcat	tttcagtaga	gatgggggtt	cactatgttg	gccagggtgg	36600
tcttgaactc	ctgacctcag	gtaatctgcc	tgcctcggcc	tcccaaagtg	ctgggattac	36660
aggcgtgagt	cactgcgcct	ggcctgtttt	ttttgttttt	gttttttaag	agacagggtt	36720
tcattcttat	tgcccaggct	ggagtgcagt	gggtgatca	tggctcactg	ctgccttaac	36780
ttctgggctc	aagcaatcct	cctggcttag	cctctcaagt	agctgcgacc	acaagcacac	36840
gccaccatgt	ccaacttggt	ttttaaattt	ttcatagaga	tggggtctca	ctatgttgcc	36900
caggctatct	tggaaacttct	gggttcaagt	gatcctccca	ccttggcctc	aaaatactgg	36960
gtgtaaagga	ttgagccaact	gtgccagct	agagagtcag	tttttacaga	tctcttattt	37020
ctggctgtta	agtgtggatc	agatagattt	tgaagctctt	tgggaagacct	ggtcaggatc	37080
tgcttatcaa	tcacttatgt	caacatcata	tttactgcac	gaggaatgct	gtactcttct	37140
ttcatcctgt	ggcttctctg	gcttgtgcat	ttcaagatta	tgccacacca	gtgcatcagt	37200
ctcttctact	ccacagtcca	ctgctgttgg	gtagaagaaa	tttcttttct	ctcatacagg	37260
tagagcagat	gaaatgactg	tgattaaatt	ttaaatcttt	atttgttctc	tgaagattaa	37320
tgagccagaa	cgtgaagcag	tcatttcaga	tagttatttt	tcaagtgtat	attagtgtca	37380
ttctcttaaa	ggacttgtat	tttttttttc	tttttttttt	ttcttatttc	tgaatccagg	37440
taattgactg	ctctgactca	aatggggtaa	ccataacggt	tgtgataaat	taagccaaat	37500
ttaatgtatc	ttttgcagat	ttatacatag	gatattttta	actcgatgta	taatgcttta	37560
agaacctgtt	gaaccatatt	gtttaagtgt	tgactgtttt	tgggttagatt	ttgttactaa	37620
tgcatatgtg	taaaagaaaa	ttcaaactcag	tcaaggatac	ccttattgaa	gcagtaaaat	37680
tctataagcc	gaattgacca	tgatttctac	cacgggtgct	gactttcagt	tatagtaatc	37740
tatagattaa	tcttcagagt	tatattaatc	tgtacagatt	acagaacttc	aaaaattttac	37800
cataaaattg	gataagttag	ttataaatgt	tcaagattca	gtctgtcttc	taacatgggt	37860
atagaattta	tggcttatct	gtacttactt	agaaatgtta	attgcatagg	actaaaatgt	37920
ttcaaataag	actaagattg	ttagaatttc	atcctttgaa	gggtacactg	agtacaaaca	37980
atttttgaag	ccgtaagtca	gctctcgatg	taattttact	tttatttttt	atgtgttttt	38040
tttttgagac	agagtctcgc	tctgtcgcca	ggctggagtg	cagtgggtgcg	atctcggtct	38100
actgcaacat	tcgcctcccg	ggttcaagcg	attccctctg	ctcatcctcc	caagtagctg	38160
ggactacagg	tgcattgccac	catgccagc	taatttttgt	attttttagta	gagatggggg	38220
ttcaccacgt	aggccaggat	ggtcttgatc	tcttgatctc	gtgatccacc	cacctcagcc	38280
tcccaaagtg	ctgggattac	aggcatgagc	caccgcgccc	agctaataat	tttacctttt	38340
ataaaaggta	atctcttttc	ctgattcaga	aaagccttta	gtcctgcaag	ctctagctaa	38400
ctttctgtct	tttaaattct	tccagccagg	cgcgggtggt	catgcctata	atgccagcac	38460
tttgggaggg	tggagagtgc	cttgaactca	agaggcagag	gttatagtga	gccgagattg	38520
cgccactgca	ctctagtctg	gacgacagag	tgagactcca	tctcaaaaaa	aaaaaaattc	38580
ttacaccatg	ctgtagtctt	caatttgatg	tagctctctg	ctctgcgttt	tcttgcatat	38640
gaaccttgta	tttcccaatg	tttatactat	tgaataact	acccgggggg	ttgtatctgt	38700
agaagtaaag	acacaaaagc	ttatggggta	ttatatcttg	aagatttaaa	ttcagctttt	38760
aaagcatttg	acattttatt	tcttctcttt	caaaaaaaat	gtagtcatgt	aaagaaaatc	38820
ttgcaagggtg	ttggacactt	actgaagcag	agaagatgtc	ctttgaaact	cagaaaacga	38880
accttgctac	agaaaatcag	tatttaagag	tatccctgga	gaaggaagaa	aaagccttat	38940
cctcattaca	ggaagagtta	aacaaaacta	gagaacagat	tagaatattg	gaagataaag	39000
ggacaagtac	tgaattagtt	aaagaaaatc	agaaacttaa	gcagcatttg	gaagaggaaa	39060
acagagaaaa	acacagcttt	cttagtcaaa	gggagactct	gttgacagaa	gcaaagatgc	39120
taaagagaga	actggagaga	gaacgactag	taactacggc	tttaaggggg	gaactccagc	39180
agttaagtgg	tagtcagtta	catggcaagt	cagattctcc	caatgtatat	actgaaaaaa	39240
aggaaatagc	aatcttacgg	gaaagactca	ctgagctgga	acggaagcta	accttcgaac	39300
agcagcgctt	tgatttgtgg	gaaagattgt	atggtgaggg	aaaagatcaa	aatggaaaac	39360
aaggaacaga	tggaaaaaag	aaagggggca	gaggaagcca	cagggctaaa	aataagtcaa	39420
aggaaacatt	tttgggttca	gttaaggaaa	catttgatgc	catgaagaat	tctaccaagg	39480

agtttgtaag	gcatacataaa	gagaaaatta	agcaggctaa	agaagctgtg	aaggaaaatc	39540
tgaaaaaatt	ctcagattca	gttaaatacca	ctttcagaca	ctttaaagat	accaccaaga	39600
atatctttga	tgaaaagggg	aataaaagat	ttgggtgctac	aaaagaagca	gctgaaaaac	39660
caagaacagt	tttttagtgac	tattttacatc	cacagtataa	ggcacctaca	gaaaaccatc	39720
ataatagagg	ccctactatg	caaaatgatg	gaaggaaaaga	aaagccagtt	cacttttaaag	39780
aattcagaaa	aaatacaaat	tcaaagaaat	gcagtcctgg	gcatgattgt	agagaaaatt	39840
ctcattcttt	cagaaaggct	tgttctgggtg	tatttgattg	tgctcaacaa	gagtccatga	39900
gccttttttaa	cacagtgggtg	aatcctataa	ggatggatga	atttagacag	ataattcaaa	39960
ggtacatggt	aaaagaactg	gatacttttt	gtcactggaa	cgaacttgat	cagttcatca	40020
ataagttttt	cctaaacggg	gtctttatatac	atgatcagaa	gctcttcact	gactttgtta	40080
atgatgttaa	agattatctt	agaaacatga	aggaatatga	agtagataat	gatggagtat	40140
ttgagaagtt	ggatgaatat	atatatagac	acttcttttg	tcacactttt	ttccctccat	40200
atggaccag	gtcggttttac	ataaaaccgt	gtcattacag	tagtttgtaa	cattttgtaga	40260
ttggatagca	tttttatgat	ttgatgagtt	tcttgtaagg	ttaccgtttc	taagagttgt	40320
gcttttatggc	cactgagaga	attcagaata	aattgaaaaga	tggagtctaa	aaattattag	40380
ctgtttacaaa	tggaacattt	cattataacg	tgatcacttt	gacttgagca	aatgggttaa	40440
tttttatctt	aaaaatcagt	taagaatata	taaaatccta	ctttggccaa	gtttgtttct	40500
tttcattata	gttttatatga	aaagatcacc	ttagtgaaga	ttattttctt	ttaatctttt	40560
atgtatttat	tcactttttg	aagctaggaa	tgagcaaacac	aaattttact	ctgaagtcag	40620
aagagctcat	atataataat	tctaagtctc	cacctatttt	cacttgcca	ttccatgtac	40680
cagcttagtt	atgatactta	gtcacataat	tatctttgat	aaaggtagag	gcacaaagag	40740
gcaaactaag	caagtcaaat	tctaattgtgt	gtacttcata	ataatttttt	atccattttc	40800
atctttatat	tctgtaacat	gaaacttacc	taatcttcaa	atgttagctt	catttttttac	40860
ctttgaaata	cttaatcttt	ctgaataaat	ataatgtgtc	tataaaaata	tgagactgat	40920
tctgggtgtct	ttagtcatta	agctgggtatc	tagtcctata	atgaacaaag	gtgaagctgc	40980
cttgaggaga	caagtgaaaa	attttttgctt	caaaggagct	cacaagctaa	gtaaataaat	41040
gaaattaagg	tatggggcat	ggtggcctca	ggctgtctgg	aggtgtttgg	aaaggcttct	41100
tgagtgagg	ggccttttgaa	ctgaacttag	tttttaagt	agctttttgga	agagaaatga	41160
ggatttgcta	tgcagacagg	gaagggaatt	tcacttaaaa	ggaaggtcat	ttggagatgt	41220
gaagatacac	tgcttttaagg	aagcagggtga	gagctggagg	ataagagatg	cagaccatga	41280
agggcccat	tttatgctaa	aggtttttgtc	ctgtaggaca	tgagagaactt	ctgaagaatt	41340
ttcaaggcgg	gtgggataag	attatatgtgt	attttagatt	acagtagtcc	ccccttatct	41400
tcaggatata	tgttccaaga	cccccagtg	atgctggaaa	ccagggatag	aacataattc	41460
tatatatact	atgcatgaat	ttcttttttcc	ttcttttaca	tctcacacat	aggtttgttc	41520
ttactataga	tcttaccat	ctcagcatatc	ttttattttct	cttgagaacc	ttcacccttt	41580
cacttaaagg	aggcgcttta	tagcttctct	ttggcatatc	caaatgccag	catcactggt	41640
gtattttggg	gtcattatta	agttacttaa	tcactcttaa	tccttatctt	agggataact	41700
gaacacaaac	actgtggtag	gataacagta	tatctgatta	acagactgct	actaggtgat	41760
taatgggtgg	gtagtgtaaa	tacacaagaa	aaggatgatt	cacatcccat	gtgggatgga	41820
gcagaactgc	attattttcat	tacattactc	agaacaggca	tataattgaa	aacttatgaa	41880
tttttttttt	taattatttg	agatggaatc	ttgctttgtc	agccaggctg	gagtgcagtg	41940
acacgatctc	agctcactgc	aacctctgtc	tcctgggttc	aggtgattct	cctccctagt	42000
ctccaagta	gctgggacta	taggcacgtg	ccaccacacc	cggctaattt	tcataattttt	42060
agtagagatg	gggtttcacc	atgttggcca	ggctgttctt	gaaatcctga	cctcaagtga	42120
tccacacatg	tctacctccc	aaagtgtcgg	gattacagtc	gtgagccact	gtaccccgcc	42180
taaaactgat	gaattatttc	tgaaattttc	tatttaacat	tttcagacca	cagttgacca	42240
caggtaacgg	aaacctcaat	cacagaaagt	aaagccgtgg	atacgggtggg	actaatgtat	42300
tggtagcagc	ctagaggatt	gatgggaaag	gtatgaagct	agaaggtggg	caatataata	42360
cagacatgag	ctgatgaaca	tctaaactgg	gactatacta	gtaggagagg	aaaggaaaaa	42420
acatttgga	aatagtaaca	ttgatatttc	ttgtgaagga	gaagtagaaa	gtaacagtga	42480
cttctagatt	tctgggttgg	gtcatctgtt	gttggtatagt	agtaccactg	agatagggaa	42540
ttcaagggtt	ggggcaagg	taattggaga	tgagaattgt	gtttggagg	aactactgac	42600
attcaagtgg	agagggttag	ttggcagtta	gttctatggt	catctctttt	gccgagactg	42660
tatatattatc	agactcctgg	gagaacacca	acatccatgg	ggttgtagg	aaggctaagg	42720
acaagagtgg	ggagtgttac	cttgaaaaatc	caaaagccat	ctcaagtaaa	aggaataaat	42780
gtgtcatgct	ttttaaaaag	ttgatgtgcg	gaaaatgttt	tcttggcttg	gaaactgggc	42840
ggccagggga	tgacagtatg	gacttccagt	gaagtagtga	cggaaagcctg	atcatagaca	42900
ttaaggaaa	cggtgtaggt	gttgtgagct	tttgctgtaa	gaaaaagtgtg	agacttttgt	42960
tttgctttgt	ttgtgagaga	tgtgtatgta	tttctgctga	gtgataaagc	cagcggggag	43020
ggactgattt	ttataggaaa	ggaggaaaaa	taatggaaac	acatctcatt	atttttattgt	43080
cacatttctt	ttctttgtta	tcttttgagt	gtttcccttt	tttgccagta	gagttattgt	43140

ctatttttttc	tttctatagg	acaaaaaaac	taatacagac	tcctttatatt	ttatatggat	43200
atactaggat	tgtaattcag	atattttaata	tcttttatca	gtgttcagat	catagattaa	43260
tggagaaaaac	atttaaaatt	gttttaaatt	taaatacatt	gaactctaac	atagatgaaa	43320
aatgtgttta	ctgctttcag	tcgacctgat	aaaaagcaac	gtatggtaaa	tattgaaaac	43380
tccaggcatc	gaaaacaaga	gcagaagcac	cttcagccac	agccttataa	aaggggaagg	43440
aaatggcata	aatatggtcg	cactaatgga	agacaaatgg	caaactctga	aatagaattg	43500
gggcaattac	cttttgatcc	tcaatactga	ttcaccaattg	agttaaatta	gacaactgta	43560
agagaaaaat	ttatgctttg	tataatgttt	ggtattgaaa	ctaatagaat	taccaagatg	43620
acaatgtctt	ttcttttgtt	tctaagtatc	agtttgataa	ctttatatta	ttcctcagaa	43680
gcattagtta	aaagtctact	aacctgcatt	ttcctgtagt	ttagcttcgt	tgaatttttt	43740
ttgacactgg	aaatgttcaa	ctgtagtttt	attaagggaag	ccaggcatgc	aacagatttt	43800
gtgcatgaaa	tgagacttcc	tttcagtgtg	agagcttaaa	gcaagctcag	tcatacatga	43860
caaagtgtaa	ttaacactga	tgtttgtgtt	aaatttgcag	cagagcttga	gaaaagtaca	43920
ttgttctgga	atttcatcat	taacatttta	taatcttaca	ctcacttctt	gtctttttgt	43980
gggttcaaga	gccctctgac	ttgtgaagaa	tttgctgccc	tcttaagagc	ttgctgactt	44040
gttttcttgt	gaaatttttt	gcacatctga	atatcgtgga	agaaacaata	aaactacacc	44100
atgaggaaaa	ctaaaggctc	ttattttaaaa	tctggcattg	tattaacatg	taattttata	44160
ctatgtggta	ttttatacat	ttcctcagta	gtgatatttg	gtaaaagcag	tcatacagct	44220
tttttctaa	ttccatgaat	cttaccagct	gtttaccgaa	gtatttaagc	agcatctgaa	44280
tattttccac	cagcaatgtt	aattttatcta	ggaaaagtcca	gaatttcatc	gtcatgttga	44340
atttcccttt	taacttccgt	tcatagacat	atatgtgact	tccaattcga	ccctctggca	44400
agtgaagtgt	gaagaaaaaca	gcagttcttt	tataattgct	tgaaattagg	aaagcgctta	44460
tttctagaa	gcaataaat	gtttgagtaa	ataaaggcta	cattttgctg	agtactgttt	44520
cagtcaattt	tagaattgcc	tattctaatt	gctgtctaca	actttttgct	taataaaaaga	44580
attaacttat	aggaagttaa	atactttgat	agttacagaa	ctgggggcta	ttttgactgg	44640
agaaaagact	aattatgaaa	tgtgggttga	aacagaccat	aaaaaggtta	tattatctat	44700
ttacctgagg	gttttctaaa	cctggggtaa	aattaaaata	ctgagttttc	ctctttttca	44760
tgtttactta	cctcttccaa	aatgccgaag	gtgatcaagt	gagtaggcaa	tgatgcatac	44820
tcatagaact	ctctatgtaa	ccagtttaag	ggcatttaggt	aaaatacatc	tgcttcatca	44880
agataatgac	tttttccagt	caggtctggc	gggcactgga	gaaatctcat	gggaagtggg	44940
cagtgaacat	ggctatgaaa	agaaaagtta	ccataataaa	tacaagtaaa	acatgaaagt	45000
tttcattagt	cttaagatat	gtcattttata	cttagcaaaa	tgtgaaatct	gaatctgtaa	45060
actgtgttgc	agttaagtga	agaagcaagc	ctttaactca	ttttctcaaa	gataaaaaaa	45120
acatgattct	tataccatgt	acctatgcag	cagcagcagt	ataacctata	agcccaaact	45180
agtgcataga	agtccatttc	aaggagggaa	gtaggctcag	aggggggactc	aacattctgt	45240
agcattggta	ttctgttccg	gaaacataaa	tggtcctcag	gaccaggtaa	gttaacttgt	45300
taataggaga	gtaattctcc	ataggtgtat	ttgataaagt	aggaaaactgt	gatcataatc	45360
agaaaggatt	ctttctctct	tccctttctg	ctctgatagg	ggatggatca	catacttata	45420
tggcaagttt	tttttttttg	aagacaagag	tttgcgtctc	gtcaccagg	ctggagtgca	45480
atggcgcaat	ctcagctcac	tgcaacctcc	acctcccagc	aattctcctg	tctcagcctc	45540
ccaagtagct	gggattacag	gcgcccgcga	accacgcctg	gctgattttt	gtattttttt	45600
agtagagatg	gggtttcacc	atggttgcca	ggctggctct	gaactcctaa	cctcaggtga	45660
tccaccgcgc	tcagccttcc	aaagtgcctg	gattacaggt	gtgagccacc	acgcccagcc	45720
acatggcaag	tttgaagtgt	tttttttttt	tatttaagat	gattgagaag	tagagagcaa	45780
catatgtcca	ctgattaaca	tccaaataag	taatggtttt	attgtggcat	agaaagacta	45840
gagtaggcgc	ggtgcagtgg	cttatgcctg	taatcccaga	actttgggag	gccaaggcat	45900
gtggatcact	ggaggtcagg	agttcaagac	cagcctggcc	aacatgggtga	aacctgttat	45960
ctactaaaag	tacaaaaatt	agccgggcac	ggtggtatgt	gcctgtagtt	ccagctactc	46020
aagaggctga	ggcaggacaa	tttcttgaac	ccagaagacg	gaggttgacg	tgagctgaga	46080
tcatatgcca	ctgcactcca	gcctgggcga	cagagcaaga	gtctgtctca	aaacaaaaaa	46140
aagattagag	tataaaaaag	atggattcat	ttctaatacc	agttatgaca	atttaagcca	46200
gttacttagg	tcatgcaaaa	agccatgttt	ataattgcct	taggaaaaat	taaacctcac	46260
tgatacaaac	atttaaaatt	tccagttaga	aatggagtta	gtaattatgc	aggaggttta	46320
tttatgaaat	gcataaaaa	taaatgtaca	caagacctaa	tagtgattta	tttattggaa	46380
atgaaggctc	tctttcaaag	ggaagcagaa	attcctcaga	aaaagctgcc	ggcctactct	46440
agtccttcta	tgccacagta	aagccattac	ttatttggat	gttaatcaag	ggacagatgt	46500
tgctctctac	ttccaagtct	gatgcaaaa	aggcatcaga	ctttcctctc	ttgtgtgctt	46560
tgaaaagggtg	tggagaactt	ggtgaactat	tcaaagccta	agacatcaac	tgactacagt	46620
taagtataaa	gaacatcttg	gtacatctag	gattcctgtt	ctcctcagta	ttatccctaa	46680
tgtgagcatg	gagagtgaat	gtcccttttt	cagccacata	tacatatagt	agggaaatcct	46740
caagttgaaa	ggatacttga	tgtcttcctt	ttagcctgtg	gtttttgcta	ggatctccat	46800

ttttctaaac	tgtatattaa	ttactggcat	taatgattag	ttaaatagga	gtattccaag	46860
tgttaaattc	ccctaaaatg	ataaccactg	taattaaatt	aattgaacgt	gcataggaga	46920
cattaactcc	agattgttta	aagccagact	gagttaaata	gttatagatt	ttatgtattt	46980
atztatttat	tttttaggtt	agtctcgctc	tgtcgcccag	gttggagtgc	aatggtatga	47040
cctcagctca	ctgcaacctc	cgctcccga	gtagctagga	ctacaggcat	gcgccacaac	47100
acctggccaa	ttttttttgt	attttagtag	agtcaggggt	tcaccatgtg	gccagggcta	47160
gtctcaaaact	cctgagctca	ggcagtcctg	ccgcctcggc	ctcaciaaagt	gctaggatta	47220
caggcggtgag	ccacaacgcc	cagcctggta	tataattttc	tgtaggaaat	ctggctcctt	47280
tgccctata	ccattactgg	gtaattagta	actaatacag	cttcctgaaa	taaagcacag	47340
gaacaaatgg	atgtcttttt	aaaggccata	catagtttag	gcaatttttag	tatattttcc	47400
agaaacactt	aattcaagca	ttagaatatc	atctagtcgc	attccctaata	tttttacagg	47460
tgagacaact	gatgtccaaa	gagattaaaa	atctagtttta	aggccgggtg	cggtgggtca	47520
cgctgtaat	cccagcgctt	tggggaggtt	gaggtgggctg	gatcacctga	ggtcggggagt	47580
tcgagatcag	cctgaccaac	atggagaaac	cctgtctcca	ataaaaaatac	aaaattagcc	47640
gggcatgggtg	gcacattcct	gtaatcttag	ctactcagga	ggctgaggca	ggagaatcgc	47700
ttgaacccgg	gaggcagagg	ttgtagttag	ccaagatcac	gccattgcac	tccagcctgg	47760
gcaacaagag	caaaactcca	tctaaaaaaa	aaaaaaaaaga	agtctagttt	aagatgaggg	47820
caataatcca	gtagtaaatac	tggactaaaa	tccatgtttt	tttttttttt	tttttttgga	47880
gacagagtct	tgctctgttg	cccaggctgg	agtgagctgg	tgcaatctcg	gctcactgca	47940
aactccgctc	cctgggttca	tgccattctc	ctgctcagc	ctcccagagta	gctggaacta	48000
caggcacctg	ccaccacgcc	cggtcaattc	tttgattttt	tagtagagac	ggggtttcac	48060
ccagcttagc	caggatgggtc	tcgatcttct	gaccttgtga	tccaccgcc	tcggcctccc	48120
aaagtaactgg	gattacaggc	gtgagccacg	gcgcccggcc	taaaatccat	gttttaagat	48180
taattcaaata	tgtgtaaaga	tgtatcacag	agatttgtag	taaggtaagt	aatacatgag	48240
tttctttact	aagaagacta	tcagatacct	acaaattgtt	ttatactgat	ttaaatcaga	48300
attaggtgta	agtaaattgt	ttttaagaa	taataaagtt	tacggccgag	cacggtggct	48360
cacacctgta	atccccgcac	tttgggaggg	cagggcaggg	agatcacgag	gtcaggagat	48420
cgagactacc	ctggctaaca	cggtgaaacc	ccatctctac	taaaaataga	aaaaattagc	48480
cgggcatggt	ggcaggcacc	tgtgggtccc	gctactcggg	aggctgaggc	aggagaatgg	48540
cgtgaacctg	ggaggcggag	cctgcagtga	gcggagatcg	cgccactgca	ctccagcctg	48600
ggcaatagaa	cagactccgt	ctcaaaaaaa	aaaaaaaaaag	aaaaaaagtt	tattttaaacc	48660
attttctttg	acacagttca	agtgggtttt	aaaatccatc	agtgaataaa	tatgtgggag	48720
ttttaaattt	atcatttgat	cagtgaacca	ttaattcaaa	tccagggaatc	tgaaagggaa	48780
ttttaaagta	gtcagtttca	gtttcttaac	agcatatagt	ggaacatctt	ttattacctg	48840
taataaggag	tagagtggca	aggcatcatt	ataaatattg	aagctgaaga	tttattggga	48900
ttgttgtaac	aaactttttg	aatatgactc	atgacatcaa	gagtacctcg	ttgatgaact	48960
aaaccagtat	aaagggcgag	gaacaaattt	gataaaaaaca	ggaaacttag	agctgggttc	49020
ttccatgttt	tcagggtgggt	taatgagtat	cctatatgaa	gatagacata	ttgaacctta	49080
acactgacaa	tcttttggtta	tgtttaactgc	aaatacatct	gtaattttta	atggaaatag	49140
caaaaactgt	aatactgtta	tagacaaata	agaaataagc	aataagtcat	atctctgacc	49200
attcaccatt	cactactgtc	atctaggtct	tgactttttc	tagtaaaagg	tattgaggta	49260
tagtggaag	atgatgggtta	tggagtccaa	caggtccaga	tttgaattcc	agttctagca	49320
caagtcgttt	tactttgctg	gtcattggga	taatagtacc	ttattcaagt	gttagaaaaa	49380
atgtccagt	actgccctgg	tacatagtag	ttgctaaata	aataggactt	tttaattattc	49440
catttaccta	cctctttaat	ctcccaagca	ctaataattg	gtatttttagt	gtgtaatacg	49500
agtttcaata	atgtgtcctc	ttaggaaaat	aagccattgg	gcacctggga	gattttccgt	49560
aagtatatga	gtggaagaaa	aggtgctatg	tcttacattt	tttttccac	aacagtggga	49620
aattttggtt	tcccactaca	gtcaggcaat	ttggagatgc	tgaacaattt	ttcttttttg	49680
atztatgaaa	gggattattc	tgtggggcaa	aacaaaacaa	aaaaccaaag	gaaaaaacca	49740
agtagaatga	atagacgggt	ataaaaggat	aagtaaaagt	ctctctcccc	tctgatagtc	49800
cttttcttca	gcaacagcca	ctattaatgg	acatattagg	atctactgag	aatacaaaga	49860
acaggccttt	ccactggaaa	agattaagct	tattagtaag	catgacattt	tgttcataat	49920
ttacatacac	tctttttata	gaactagata	atagttcttt	ttgaacttgg	gtattcttca	49980
tccaaacctt	ggtttgccca					50000

<210> 10

<211> 17386

<212> DNA

<213> Homo sapiens.

<220>

<223> human DYXC1 chromosomal gene region, nucleotides
200001-217386

<400> 10

```

aaatgttagt acaataactga atgggaccaa ggcagtgttt tttattttgt tcctcctatg 60
aatatgttaa tatcatccac agttcatacc tcatgagttg gaatatcaca tgtccatgtc 120
acctagtatt ttttaactcta cttgaaatag ttctgattaa agaataatct gaaaagtggg 180
gtggtgaaaa atgtagcaag attaagaaaa ctaagcctat cacttaaate tacatttata 240
agatgtttga aatggtaaaa tgaggaacct actaaaagga atgataatta gaactagctt 300
tatttgaaat aaaatagctg agatgagagg attgcttgag gccaggagt caagaccagc 360
ctgggcaaca tagtgagact ccatttaaaa taaaaaaaaa ttagccaggc gtgatagtgc 420
gcacctgtag atccagctac tgggaaggct gaggcaggag gttcacctgt gctcatgagt 480
ttgaggggac agtgagctat gaccacgcca ctgcactcca gcctgggtga caccctgtct 540
ctacgaaaat aaaaatgaat aaaatagggc cagggtgcggg agctcacacc tgtaatccca 600
gtactttggg aggacaaggc aggcggatca cttgaggtca ggagttcaag accagcctgg 660
ccaacagagg tgaaacccca tctctactaa aatataaaaa ttagccgggc gtggtgtcag 720
agggtgcagt gagccgagat cagccactg cactccagcc tgggcaacag agtgaaactg 780
tctcaaaaata aattaaaaaa taggattcta aaagttcaac catctgtaat aacccaatc 840
acagacacag cagatcccca aatataagtt gaagcactta acttaggttg gtaggctaaa 900
acaacatcta ctttagtagg ctcaaataca aaaagctaca ttaaagcctt gtctttgttt 960
gtactgctat actggaatac ctgagactgg ctaatttata tttacttggc tcatggctct 1020
gcaggttgta caagaagcat ccactggtga gggcttcagg ctgcttccac tcatggcaga 1080
aggtgaaggg gagtcagttt gtgcagagat cacatgggtg gagagcagaa gcaagaaagt 1140
ggaaggtgcc aggtctcttt gtacagccag cactcggggg aactctcatg gaacctata 1200
taaggagaac tcacttacta ctccaggatg gtgccaagcc attcatgaag gctccacccc 1260
catgatcgaa gcactcccca ttaggcccc cctccaacag tggggatcaa atttcaacta 1320
aggtttaggg gacaaacgtc caaactacag caagcccatc ctacagcaag gcccgagaag 1380
atacagtttg ttctcaatta tttgaagata cttacaaggt gagcatgtgt aaagtgattc 1440
acttattaat aatttggttca ttcaaggcgg ggggctgtgg ctcacgcctg taatcccagg 1500
actttgggag gccaaaggcg gcagatcgcg aggtgaagag atcgagacca tcctggccaa 1560
catcgtgaaa acccatctct actaaaaata caaaaattag ctagggtgtg aggcgcattg 1620
ctgtagtccc agctgaggca ggctgaggca ggagaatcac ttgaaccggg caggcatagg 1680
ttgcagttag ctgagatcgt gccactgcac tccagcctgg tgacagagcg agatgtcgtc 1740
tcaaaaaaaaa aaaaaagaaa ctatggcact aggaatacaa tagtatagg gggtgacaca 1800
aaatgggaat acttggtgat caagactgtg gcactttcag tactggtgag acagagcgtc tcttaagtta 1920
ataacatgct tgtgtttcca gcactttcag tactggtgag acagagcgtc tcttaagtta 1980
ggtaatgctt gccttacatg atggtgattt taactctctg agcttagctc attttaggat 2040
ggatcatttt agtgagaact gaatctccat attacttaga gaagtaatat aaagaaaatg 2100
ctgggaagag aaggaacagc tgaacaatgc cagggagagt caggtgatag cttagttttc 2160
ttggggacag tggatactga aacagttgcc attcaaaatt gtcttcaaca gtattatgga 2220
tccgatgagc ttttgtgtaa tattctggga gccttactac atgtcacagt attatttcta 2280
agaaaaaaaa atttcaggtt ccaacttaaa aatgaagttt ggggataaaa cttattttaa 2340
aatagaactg tctttatgat tattatTTTT ttgagatgga ctctcgctct ttcgccaggc 2400
cgggagtgca agtggcatga taccggctca ctgcaacctc cacctcctgg gttacaaggc 2460
attctcctgc cttagcctcc tgggtagctg ggattacagg tgccctgccg catgcccggc 2520
taatttttgt attttaagta gagatggggg ttcaccatgt tggccaggct ggtctcaaac 2580
tcaggtgatc tgcccgccac agcctcccaa agtgctggga ttacaggcgt gagccacagc 2640
gcccagccag aactgccttt atttacatgt ttagcatcct ataagcatta ctatgcattt 2700
gacatataaa gaaaatatct ttataatttc agttatcatt aaatgacttg tgcacatgtt 2760
agaaaagaac ccaacttttag agtataagtc aagagtcctg aatttaaggc ctctgagggg 2820
tttttaaaac ttctggcact gaaagcttcc aaaggggatt tcagaaatga gttgctaaag 2880
gaaggggttg aaagattttc cagttccaat gctagactga gtgaaccaca agagaagcct 2940
aaggtccatg gttttcttat agaccagtag tattgtttca tcaatattta aaacaaatga 3000
acaagattcc agtaggtgac atccagtaag tctacttaat ggcacgcaca aatttgagga 3060
tggagttctc actgaaataa tccaccctca aatgacctag cttcagaaag tgatcatccc 3120
caccagtaa atgatgtgta tcccaatcac tgaagattta agactgtgtg tgtacccag 3180
tgactaaagt ataggttcct tcctttcaca tagtaacaac ccattgctaa ctggatgcta 3240
aacatcacc ctaaatactt aatttgctcc tgttatctgg gcctacaaaa agatacttga 3300
aagtcggtat acagaaaatt tctggaagaa ctgcttaaga aagtataac aatagttacc 3360
tctggggaat gggactagat gacttgagga tgacacacta tttttgtacc atcggcattt

```

atttttataa	taaaaaaata	cactgggctc	ctatcagatc	atgttcatca	gactactggt	3420
acagaaatgt	ttaaaatcca	ttacatctca	gttgactact	cttcaggata	aaatctaaaa	3480
acctgagcat	ataagaagat	acttcatgag	gtgggttcctt	tataaagcca	tatctcttaa	3540
tcacatgtga	ttatttagct	tgatatacac	actttaaaaa	ttttggatat	ctagcgtggc	3600
attctgtatt	ttccagcaat	cactaatacg	ttccttctta	ccaaggtaag	gttcacggta	3660
atagagagga	tgggagtatc	tgagactgta	cattgctgat	tccatcctgg	ttttgacaag	3720
aattatcagg	aaacctaatg	ttaagaaaaa	aaatccctac	cacattttac	caattagaga	3780
gatatctgag	ttactgtttc	tattttttaa	tactctttga	gaaagcttag	tttcagtgtt	3840
tagataagaa	caacaaaagg	tggttcaatt	ctggaatggg	acatacagta	gaatggggct	3900
gggaaagaga	gactttgaac	tactaaccat	aatgagggta	ctgggcacag	atgaaggat	3960
caagaagaat	tttttttttt	tagacagaat	ctcgctctgt	cacccaggct	ggagtgcagt	4020
ggtgccgata	tcggctcaat	gcaacctcca	cctccagggt	tcaagtgatt	ctcctgtctc	4080
agcctcccaa	gtagctggca	ttacagggtgc	gtgccaccac	acccagctaa	tttttgtatt	4140
tttagtagag	acagggtttc	acctgtttgg	ccaggctggt	cttgaactcc	tgacctcagg	4200
tgatccaccc	acctcagcct	cccaaagtgc	taggattaca	ggcgtcagcc	actggcagct	4260
ggccaggaag	aatttttatgt	tgctattttg	ttaagggaagt	aaagccatct	ttccatcttc	4320
gatagaattc	aacagttaat	gcctaaaaca	aagaccttta	agtggcatta	taaatgtttt	4380
agagatatcg	agataaatac	caaaataacc	agctgaaaaga	atgcttaagt	gattgttttt	4440
ggggagagga	aatagggaga	gcaggggaac	aatttttttt	tttaattcct	tgtggaatgt	4500
cttctgaaat	aatgtacata	tgcaattttg	ataaaaagat	tagaatatgg	ggccagctgt	4560
ggtgcctcat	gccgtaatcc	cagcactttg	ggaggccaag	gcagggtggat	catctgaggt	4620
caggagtctg	acaccagcct	ggtcaacatg	gtcaagcccc	aactaaaaat	acaaaaatta	4680
gctggctgtg	gtggcatggg	cctgtaattc	cagctactct	ggaggctgag	gcaggagaat	4740
ctcttgaacc	caggaggcgg	aggttgtggg	gagctgagat	tgcgccactg	cactccagca	4800
tgggcgacag	agagagactc	tgtctcaaaa	aaaaaaaaaa	aaaaaaaaaag	ataagaatat	4860
ggaaaaacaa	agtggcccag	taagagagaa	gtctatatatta	gccactgtgg	taaaaaacaga	4920
taagcagaca	ctcaactcag	aatcagtagt	gggtgctgaa	ctctgtcagc	acaaatgaga	4980
gattcaaaat	agaattttaa	ttagtgttgc	taaaatatca	cctttctttt	acagataagg	5040
aaaatgaggc	acattgttga	acaattcact	aaagatcaga	gccagtcaca	aaatatatatt	5100
tctagagtgg	agtcctattt	tataggacta	agggaaattc	aaattaggca	agagaagtta	5160
ccgtagactg	aaaaaactgc	tgcaattatt	tttcttctcg	tgtcccatcc	cactatgagg	5220
ttggcattta	tttccccacc	tcttgaattc	ggcctggccc	agtgaactgc	tttcatgaaa	5280
agaatgtggg	ggaagtgaca	gtatgcaaat	tccaagccct	tgtctcaaag	ggccttgcat	5340
atttgtctcc	tctcttgga	cccggcctat	gccaagtga	caagccctag	ctggcctgtt	5400
ggaggaagag	aaaactcaga	agagctgaga	agacttggcc	tacagctagt	tgaacccag	5460
acatgagagc	ccagcctagg	tcaatagagc	tatccaccca	atctgcagct	gtgtaagtga	5520
gctcagtggg	gatgagaact	gcccagttga	aatgtagacc	tgtaaattat	aataaatgga	5580
gttttaagcc	actacagttt	tgagggtggc	ttttacacag	caatggctga	cagagttgtc	5640
atgtttacat	aaaaataagg	taaaacaagt	cacacaaaagc	agaataaggc	tgaattttgt	5700
ggtataactc	aagatttcaa	gtagttagga	aagattcaaa	ctgggtcact	aaaacatcaa	5760
gagctccaaa	gagaactggt	ctaaatgtcc	agagatttct	gtctaggtga	catcactaga	5820
cagaactgat	cctactgttg	gaacctcttg	gcattaaaca	gccctgactg	ttagtggag	5880
tacaaatctc	ctaggaatta	gagttttttg	acctactcta	gaaccttagg	tagggtgtgg	5940
aggaaaagaa	tgcacacctg	gaggagatca	aggggttttc	taggttgcctg	tcttttaggg	6000
atccttctaa	gtagacagag	gatggaagaa	ggggtgattc	ttacctatta	gaaggggctc	6060
tctttacccc	tcacagcat	tttatctcaa	taaactgtga	ataggccctg	gttacagggg	6120
tcttgccact	taaagattca	atctttttaga	ctggcaatga	ggattcagac	aactcaatct	6180
ttgtgtaaat	acttggtaaa	gcaacaggac	acagaagagg	aatgctggaa	aaatctgggt	6240
tatgaaaaca	gaaatcaaac	caagttacta	accaacctcc	ccgtcccctc	caggcacaca	6300
aaaacatttg	cctttgtact	ctgccaatgc	ttgatttaat	tataatacac	actcaagtgg	6360
ctgtaaaaaa	acccaacaga	acagaaacca	tttaacatct	gaatagtgat	ttatgaacag	6420
atttcctctg	acaaatgggg	ccagctatct	ttaggcttg	ccaaatagct	gttagatgtc	6480
taaatttttg	tatgtgcctg	cgtttgtatg	tggttacact	gtaaaagta	gacagactga	6540
ggctttgatt	tcagaacttc	agatgtatca	aaaatacaga	tttttaatat	ttgattttat	6600
attttagatt	ttatcttctt	aaattgaaga	gattatacat	ctcagatctg	taggagttga	6660
tgtatacttg	gtcaaacatt	gcctaactca	atgtttttct	ttttttttta	gtaaaaaata	6720
agtttgaaaa	ctgtaactcc	ctagggtttt	tccagcctcc	agttccagtt	ggctagtcat	6780
ttcttctctc	tcaacgctgt	gatttttttt	aaggctctaa	tatttgaagg	aagtcaacag	6840
tcattttatt	cgaattaaac	ttgaagttaa	taaagtttca	attcgttaatt	tttccaaacc	6900
aaccaatgta	aaaaccagga	ttttcctgaa	ttgagtcatg	taaggatttt	tgtaaagtga	6960
aaaaaaatac	atgttaagac	tgtggaaaaa	tggagaaaaa	gcctgaataa	aatcaggagt	7020

taattactta	aaaaatggca	tatgccaggc	tgggcgcggt	ggctcacgcc	tgcaatccca	7080
gcacttttgg	gaggctgagg	cggttgatc	atctgaggtc	aggagttcga	gaccagcctg	7140
gccaacacgg	tgaaaccctg	tctctactta	aaatacaaaa	attagccggg	tatggtggcg	7200
gatgctgta	atcccagcta	ctcgggaggc	tgaggcagga	gaattgcttg	aacacagggg	7260
ggtggagggt	gcagtgcgac	aagatcgtgc	cactgcactc	cagcctgggc	agcagagtga	7320
gactctgtct	aaaaagataa	taataataat	tgcatatgcc	ttagagtgcg	ttttaaaagt	7380
gtaaatgttt	tgtgtgtaaa	agcattaaaa	actagtttca	acagcagtaa	atacattttt	7440
cctttgtgaa	aatgaagacc	cttacagttt	aaccataaac	ttaaaatagc	taatctaaaa	7500
acagacatgt	tactttactt	tttagtgaga	aacaccacca	ccaaatagaa	acaccaccac	7560
caaaaactgc	tttgggtatt	ggatatttat	gtgggttttt	tgtttgtctg	ttttttgaga	7620
gaaggacttg	ccatatggta	ggctgggtctc	aaactcctgg	gctcaggtga	tcctcctgcc	7680
tcaggcttct	gagtagctgg	gattaaaaagt	gcacaccact	gcactgggct	aggatcttta	7740
tgtttttatc	tcacttttaga	ggatatagga	aaaaagatat	ttggactaca	aaaagggaat	7800
attgcagtaa	tataattaat	ctgtaattaa	gtaattcctt	attaacctag	ttgaaaatag	7860
acatagttta	atgaggatgt	gttgtcttta	gactatttct	atataattta	ttttctataa	7920
caaacaaaag	cacttaccac	agaacaccat	acagaatggg	aaaactggat	aaataaacct	7980
gaattctttg	tggtcaaca	tgctgtaata	aaaacaaaata	ttattaaaaa	atattaatta	8040
tcattgtata	tgatagattg	agaaagtaat	atatttaata	taaaatatat	ttaacttgat	8100
ctattttatt	tctaagtatt	cagactgaat	ttcttgcttc	agaaattcat	cttatttttt	8160
agttataagg	tgattacgat	atggtaaaac	taatcataaa	atatgatgtc	aatttgaaat	8220
tacaaagtac	agttacattc	taaaaacggg	atttctattt	caatccaagt	aagtgaatt	8280
agtcaaat	ggaataagga	tacatacatt	tttatttttag	aatgtatttc	tgtgggtcctt	8340
caatttaaaa	ttttggtagt	attgattgac	tgattgactg	agacaggggc	ttgttttgct	8400
accagactg	gagtgcagta	gcacaatcat	agctcactgc	aaccttaaat	tcctgggctc	8460
aagcagtct	tctgcctcag	cttccccaat	agctaggact	acaggcacat	gccatcatgc	8520
cctggtaatt	ttaaattttt	tttcagagag	agggtcctgc	tatgttgctc	aggctgggtca	8580
tgaactcctt	gcttcaagca	atcctccac	cttggccttc	aaagtattga	aattacaggc	8640
atggaacat	gtgcctggct	tgtttttttt	ttttttaaag	caaataaaat	tagtccaagt	8700
tccttaaaat	tgagtgtaat	ccttatttaag	caaactacat	atctaaagta	ttcactctag	8760
tgctccata	attactacta	cttgatatctt	ctaagataat	tcccactaac	aaaagttaat	8820
ggcacctcca	aaacataaag	tttacttttt	gaagaattta	atttgatttc	ttggtaacat	8880
aaaaaat	agccttttga	acaaataaaa	tcttacctat	aaacaagcag	tgtccacagc	8940
acagtcacca	aaagtatccg	gtatctcttt	gggtgctagat	agcagccatg	aataaagaag	9000
ggtaagtgcg	tacccaagat	aactggaaat	ccttgactga	agtaccagtg	ccatggatga	9060
gaaccataaa	atgttcccaa	gttctgcagc	acgttaaat	tcaaaaaatt	aaattgaacc	9120
agagtccact	ggcaccgttg	aaggaaaaat	aaatagaaat	gtgttagtgc	caagtagtaa	9180
tctttggcat	taggggattg	atacaatttt	gacattaaat	cagaattgaa	gtctaaaaac	9240
caggcaatag	tttacattaa	taattttttt	tttttttttt	tttttttaag	atggagtctt	9300
gctctgtgcg	ccaggctgga	gtgcagtggc	gcgatctcgg	ctcactgcaa	gctccgcctc	9360
gcggtttcac	gccattctcc	tgcttcagcc	tcccagtagt	ctgggactac	aggcgcccg	9420
caccacgccc	ggctaatttt	ttctattttt	agtagagacg	gggtttcacc	atgttagcca	9480
ggatgggtctc	aatctcctga	cctcgtgac	tgctgcctc	ggcctcccaa	agtgtgcga	9540
ttataggtgt	gagccaccat	gcctggccta	ataattttta	ttaatgactg	tatgaaatcc	9600
ttcttaactg	ttattttttc	ttctttaagt	attaatgtgt	tccttggtta	tttgtaaaac	9660
tagatttttg	agattcaaa	tgagaatcaa	acttatattt	tggcagtcta	agtttgtgtt	9720
tttatttcaa	gtttttgggg	tacagatggc	ttctggttac	atgaataagt	tccttagagg	9780
tgattttctag	gattttggtc	cacccatcac	ccaagcaatg	tacactgtac	ccaatatgta	9840
ctcgaaataa	gaatttctca	cccctctctc	acccttcccc	accctgagtc	accagagtcc	9900
atttatcat	tcttatgtct	ttgcattcca	tagcttagct	cccacttata	agtaagaaca	9960
tatgatattt	ggctttccat	tcctgagtta	tttcacttag	aataatggcc	tccagctcca	10020
tccaagt	atatccagtt	aagagataaa	gaggatagta	gacatatttt	tcggactgtg	10080
tggtacttta	caatgtgaca	tattacctgt	gaagataaag	ctttgaaaac	attacaattt	10140
gaattacagc	gtaaaagctga	caataatgac	agaaacagca	acaggtaca	ttcagtgtct	10200
acttaataat	tccttgcttc	aaaatgtact	ctcctgaata	ttagctagga	gtactaattc	10260
ttttatgtag	aaagcacaac	aaattgaacc	taaggcttat	taggatatgc	ctagaagtct	10320
tttgtaatgt	atcccatatc	atttaaaaaa	tcatttgctt	ctgttctaaa	gtattaatgg	10380
attaaaaata	aaaatagctg	ttagcttaat	atacttttac	ttacttggcc	aaaaaaaata	10440
cgatcaatca	tcagagacaa	actcaaagta	acaaagctga	aaaacaaaaa	tagcatagt	10500
attcacattt	ggagcttgct	gaaaatccac	tattagcata	tggttttgta	cgtgccttgc	10560
atcaaaagcc	actataaaaa	tgctttacag	tttcaccaac	tgaatataga	tttacacatt	10620
ttgaaaggta	tctactgaaa	aagatcagta	gataagatta	tataatcgat	taatattgta	10680

aaaaatatat	taataaaaaag	attattgaaa	gactactgct	gtataacaaa	ttacccccaaa	10740
acttggttaac	ttaaactatg	aatattttacc	attttcatagt	tcctgtggat	caagaaccta	10800
ggtgttgctt	agctgggtgc	ctctggctcg	aggctcgctca	tgaattgtag	tcaagctctt	10860
agcaggggct	acagtttcat	ctgaagggttc	aattacaggt	ggagagatca	gcttccaaat	10920
ttgctcacat	ggttgctggg	ggggctaagt	tcctcaacat	atggccggtt	ccttaaagct	10980
gcctcatgac	ataattaact	ggcttaaccc	agggtaagtc	agccaagagt	gagttagaca	11040
ggcaccacaag	atggaagcca	taatcttttt	atttatgtat	tcttttcttt	tttttagaga	11100
cagggctcttg	ctctgtcacc	caggctggag	tgcagtagtg	tgtgatcatg	gctcactgca	11160
gccttgacct	cctgggctca	agtgatectc	ccacctcagc	cttccaagta	actaggacta	11220
caggtgtgtg	ccgcatgac	tggataattt	ttggattttc	tgtagagatg	gggtctcact	11280
atattaccca	actggtctca	aactccgggc	ctcaagcagt	acttccccat	tggcctccca	11340
aaatgctggg	attacagata	taagccactg	tgcctggcca	ccatagtctt	ttcataaccc	11400
agtcttgtaa	gtgatatccc	atcccttctg	ctgtattcta	ctcattagaa	ttgagtcgac	11460
aaatctagcc	catgttcaag	ggggagggga	ttatacaaag	acataaatag	caggaggatg	11520
ggatcactgg	aggccatctc	agagactgcc	tccaacaaac	acatatacag	aaaaatacgc	11580
tatgaaggta	aagctctatg	aatcatcact	acatgaacac	aactgtgtac	gtgccataca	11640
gagcaggata	aagagtatta	gcagcaccac	cttgtccctc	caatcagtca	gtccctacct	11700
cctccccaaa	agtaacccaa	aggtaaccct	tcctcttccc	aaaggtaacc	actatcctaa	11760
tttctgataa	catagatgag	ttttatcttt	ttttgaattt	tataagaata	ggatcatacc	11820
atatgtgctc	atgtctaaat	tccttttagtc	attgtgcttg	tgagattgaa	ccaagttttt	11880
ttgctgtctg	tagttcattc	ctttacaata	ctgtgtattg	taactatgta	taccacactg	11940
tatgtattcc	ttctattgat	ggacactgtg	cttccatttc	cagctattgt	gaatagtgt	12000
gcaatgaaca	ttctttttaca	catcttttgg	tatccatata	tgtgcatttc	tgtagacat	12060
atacctagga	ttggaattgg	tgggccctaa	ggtagcggtc	cctaaccctt	ttggcaccag	12120
ggtctgggtt	cttgaaagac	agttttccca	caaacagggt	gcgggggtgg	gagtggggca	12180
tggtttctgg	atgaaactgt	tccacctcag	atcactggac	attagatgct	catacggagc	12240
acaacctaga	tcccttgcat	gtgcagttca	cagtaggggt	cacacttctg	taagaatgtg	12300
acaggaggta	gagctcaggc	agtaatgctt	gcttgcttgc	tcacctcctg	ctgtgcagcc	12360
cagttctcaa	gaggccatgg	actggggcca	gtccacagcc	ttgggactgg	tgacctctgc	12420
cctaagttgt	aagtgcgaact	atgtatttat	ttagcttttg	taagtactta	aaagttttcc	12480
aaaatagtgt	attagtttgc	agtccacag	gaatatataa	gttccacatc	attttagcca	12540
tttgggtgga	tgtatagtat	agtagtattt	catgggtggc	ttactttgtt	tttcttgat	12600
aacaaatgaa	atgagtctct	ttatatattat	tggccatttt	aatatttttt	gaagtacctg	12660
atgaaacctt	ttcaataatt	tttctatgag	ttatcttttt	cttatagatt	tttaaaagtt	12720
ttatatataa	tctggatgta	aggttttatt	tttgagatgg	agcctcactc	tggtgcccag	12780
gctggagtg	agtggtgcaa	tttcagttca	ttgcaacgtc	tacctctggg	gttcaatcgt	12840
ttctcctgcc	tcagcctccc	aagtagctgg	gattataggc	atgtgccaca	atgccagct	12900
aatttttttg	tatttttagc	agagacaggg	tttcatcata	ttggccaggc	tggtcttgaa	12960
ctcctgacct	caggtgatct	gcctgcctca	gcctcccaaa	gtgctgggat	tataggcgtg	13020
agccatcgtg	cccaaccact	agaacacttt	aaatcactgg	gtaagaatta	caatccctaa	13080
ctgatgatga	ttcaacctac	gatttttcaa	ctttaaaatg	gtaccatac	agccattctg	13140
tttttcactt	tcagtacagt	attcaatgaa	ttacatgaga	tattcaaata	ttttattatg	13200
aaataggctt	tgtgttagat	gattttgtct	aactgtaggc	taatgtaagc	gttctgagca	13260
cgtttatggg	aggctaagct	gtgatgttca	gtacgttaga	tgtgttaagt	gcatttttga	13320
cgtagaatat	tttctttgtt	atttattttg	tttagagaca	ggttatcact	ctgtttccca	13380
ggctggagtg	cagtggaatg	atcatagctc	actgcaacct	tgaactcctg	ggttgaaggg	13440
atctcctcgc	ctcatcctcc	caagtagcta	ggaccacagg	cgtgcctagt	gccacctata	13500
cttggccaat	ttttaaattt	ttttgttgag	atggggctct	attatgttgc	tcagggttgt	13560
cttgaactcc	tgggtctcca	gggactggg	attacagggtg	tgagccactg	tgcttgcct	13620
gacttatgat	attttcaacc	tgcaatgagt	ttatcaagat	gtaaccctga	gtcaaggagc	13680
atctgtattg	ttatatcttt	ttccccaca	gactttgact	ttgagagcag	acactgtatc	13740
ttactcactt	ctgaattatc	aaatgctgga	tacaaagtag	gttaaagtct	tattaaatga	13800
ataagttatt	atcatgctgc	tgatgagatt	aaaaaggctt	tctatctccc	tcagtggtaa	13860
agccgatagg	aactgagccc	ctgctatctc	ctgacctca	ttattacatt	ctcccaact	13920
cactctcttg	tagccacatc	agtctccttg	ctgttccctg	aacatgccca	gcatacttag	13980
tacttggctt	gcccctttgc	ctggaatact	ctctcatcaa	gtaactacat	ggttcactct	14040
ctcaactcct	ttaagttttg	gctccagtg	caccttatca	tgggtgatctt	tcccaactac	14100
cctattttaa	aataacagct	ccccattac	cccaagcact	ggcattctat	ccttcttata	14160
ccacaattat	ttttccctgt	attaccatca	cttgacaaat	atatattttac	tcttatcttt	14220
ttagctgtct	gtctctccct	actagaatgt	aaacttcatg	aaggcaggta	cttttttttg	14280
ttaaactgat	gcactctcta	catctggaac	actgcctggc	acatagtagg	attaaataat	14340

tcttgaatga	atgaatacat	ttaatgcaat	gttattaata	catctgagaa	acgacaacag	14400
tagcaactga	gatgcaagat	aatttagtcc	ttttcagatt	gctacccgaa	aaatacttgt	14460
gactagtga	tactagtaca	gtcatgcatt	gcttaacaat	ggggatacat	tctgagaact	14520
gcatcattag	gcagtttcat	cattgtgcaa	acatcataga	gtgcacttac	acaagcctag	14580
atggtacagc	ttacagacat	ctaggtctata	tgggtatagcc	tactgctcct	aggctacaaa	14640
cctatacagc	atgatagtat	gctgaatatt	gtaagcaatt	gcaacacaat	gctatgtatc	14700
tgtgtatcta	actatagcta	aacaggtcgg	gcatggtggc	ccatgcctgt	atttccagca	14760
ctttgggagg	ccaaggtggg	tggatcacct	gaggtcagga	gtttgagact	agctggccaa	14820
catggtgaaa	ccccaaactc	actaaaaata	aaaaaattag	ccaggcgtgg	tggcaggcgc	14880
ctgtaatccc	agctgtttgg	gaggctgagg	caggagaatc	acttgaacct	gggaggcggg	14940
ggctgcagtg	aagtgcagaat	gcaccactgc	actccagcct	aggtgacaga	gtgagactcc	15000
gtctcaata	aaaaaatata	tatagccaaa	cagagaaact	aaagtacact	aaaatacggg	15060
aatataatct	tatgggacca	ctgtcataaa	tgcagtccag	tgctaaccaa	aatgtcatta	15120
tgcggtgcat	gattgtatat	taaaaagatt	actgttgtaa	gagtcagaat	gcagtcaccc	15180
cttcagtaaa	taattattcg	gggtagtcta	ctagatactt	gggatacaac	tcatcctagg	15240
agctcatagt	gtagttagaa	gatgtgggtt	tcaataccag	tatagcaacc	agcccaatga	15300
ctttgactaa	tacattttta	atctctgcga	gcctcctgtt	ttctctacta	caaaaataaaa	15360
acatatattg	cctagactga	agtattatga	aaattatgag	gtaatatgtg	aaaacacatt	15420
atgaattata	aagccttata	caaagttaaa	agaatcaagt	atctctaaaa	tatatgtgag	15480
aaatatttag	gaaataaagc	attggaaaaa	actaagttag	aaataattac	aaaagcactc	15540
agttaagcaa	attaaaaatg	ttataatcag	gatcataaat	aaaaaatata	agttttgcat	15600
tattctatct	ccttggacta	agagttctca	ctgacattag	aagataaaat	aattaactga	15660
aagatgtaaa	atcttggtcg	taatctgtga	tttgtaggct	actaaaataa	atggatggat	15720
tattgccaca	cttaccctac	aggtaaaaaa	tgatgtagaa	taagatcaag	ctttcttggt	15780
tcttgacaga	aatgtctgaa	gagcaaagg	gtccacagaa	tgacagctgt	gggacgaatt	15840
atgaaggcaa	gtgccaccag	ggatgagtat	ttgacactat	aagaggaaaa	tgtgtgataa	15900
gacaagtggg	aaattaaact	gaagttatct	atcattttaca	ctgtgatttg	acattttcct	15960
tttgggtata	atagctatat	gaactttttt	ttgttttggt	ttgttttttt	tgagacagag	16020
tctcactctg	tcaccagggc	tggagtgcag	tggcatgac	ttggctcacg	gcaacttctg	16080
cctcccagg	gcaagtgatt	ctcctgcctc	agcatcccga	gtagctggga	ttacagggtg	16140
gtaccaccat	gcccgaacta	ttttttgtat	tttcagtaga	gatgggggtt	caccttggtg	16200
gccaggctgg	cctcaaactc	ctgacgtcag	gtgatctgcc	cacctcagcc	tcctaaagtg	16260
ctgggattac	aggctaatac	ccatgccagg	ctaatttttt	gtatttttag	tgggagacag	16320
ggttttacca	tgttggccag	gctggtctca	aaactcctgac	ctcaggcgat	ccgccagcct	16380
cagcctccta	aagtgtcggg	attacaggca	ggagccacag	tgcttggect	aaatagctat	16440
attaactttt	gcagggttact	tacgctttct	gggtcttagt	ttttcttata	ttttaaaaaa	16500
ggtaatatct	aaagccggtt	tcagtgtcta	tcttctaatt	ctagtatttt	caaataagaa	16560
gttatcatat	gtcttaaatg	cagtcttggt	tgctaaaaag	catgcttttt	acctcataac	16620
tttgccaatt	actttcttga	ttgaaaaaaa	aatgatcaag	tttctcctaa	ggagctataa	16680
gaaagtcata	aagagaggct	ttctctaaga	aaaagcatga	gcattttaaag	aaacaggatt	16740
atthaggcag	tgatgggctc	agagtattta	gaattttggt	ttgaaagtta	attttagcca	16800
agtgaatat	atatgcatac	aactgataaa	aggcctactg	tataaactgt	atgatcatgg	16860
atagaaatac	agatttttat	taacaggact	tctctaaact	aatggttgaa	agagacaatt	16920
tgataattta	atcatgagga	ctatggatag	tatattatta	tgtggaaaaa	tacttagtcc	16980
tgtaaaaaat	taaaagaaa	caaaataaga	caacctatat	taccattata	tacctattaa	17040
ctaataaaaa	taactataaa	gaaatctgta	ggccagggtg	gggtggctcag	gcctgcaatc	17100
ccagcacttt	gggaggccga	ggtgggtgga	tcacctgaag	tcaggagtgc	aagaccagtc	17160
tggccaaaat	ggtgaaaccc	tgtctctact	aaagatagaa	aaaaattagc	tgggtgtggt	17220
ggcagggtgc	tgtaatccca	gctacttggg	aggctgaggc	aggagaatca	cttgaacctg	17280
ggaagtggag	gttgcaatga	gctgagatca	tgccattgca	ctctagcctg	ggcaacaaga	17340
atgaaactcc	atctcaaaaa	aaagaaaaaa	aaaaaagaat	gaattc		17386

<210> 11

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: RT-PCR primer

<400> 11
gttgacagaa tgctgttcca cgtcg

25

<210> 12
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: RT-PCR primer

<400> 12
caagctgagg cacgaagagc aatga

25

<210> 13
<211> 1263
<212> DNA
<213> Pan troglodytes

<220>
<221> CDS
<222> (1)..(1260)

<400> 13
atg ccc ctt cag gtt agc gat tac agc tgg cag cag acg aag act gcc 48
Met Pro Leu Gln Val Ser Asp Tyr Ser Trp Gln Gln Thr Lys Thr Ala
1 5 10 15

gtc ttt ctg tct ctg ccc ctc aaa ggc gtg tgc gtc aga gac acg gac 96
Val Phe Leu Ser Leu Pro Leu Lys Gly Val Cys Val Arg Asp Thr Asp
20 25 30

gtg ttc tgc atg gaa aac tat ctg aag gtc aac ttt cct cca ttt tta 144
Val Phe Cys Met Glu Asn Tyr Leu Lys Val Asn Phe Pro Pro Phe Leu
35 40 45

ttt gag gca ttt ctt tat gct ccc ata gac gat gag agc agc aaa gca 192
Phe Glu Ala Phe Leu Tyr Ala Pro Ile Asp Asp Glu Ser Ser Lys Ala
50 55 60

aag att ggg aat gac acc att gtc ttc acc ttg tat aaa aaa gaa gcg 240
Lys Ile Gly Asn Asp Thr Ile Val Phe Thr Leu Tyr Lys Lys Glu Ala
65 70 75 80

gcc atg tgg gag acc ctt tct gtg acg ggt gtt gac aaa gag atg atg 288
Ala Met Trp Glu Thr Leu Ser Val Thr Gly Val Asp Lys Glu Met Met
85 90 95

caa aga att aga gaa aaa tct att tta caa gca caa gag aga gca aaa 336
Gln Arg Ile Arg Glu Lys Ser Ile Leu Gln Ala Gln Glu Arg Ala Lys
100 105 110

gaa gct aca gaa gca aaa gct gca gca aag cgg gaa gat caa aaa tat 384
Glu Ala Thr Glu Ala Lys Ala Ala Ala Lys Arg Glu Asp Gln Lys Tyr
115 120 125

gca cta agt gtc atg atg aag att gaa gaa gaa gag agg aaa aaa ata 432
Ala Leu Ser Val Met Met Lys Ile Glu Glu Glu Glu Arg Lys Lys Ile
130 135 140

gaa gat atg aaa gaa aat gaa cgg ata aaa gcc act aaa gaa ttg gaa	480
Glu Asp Met Lys Glu Asn Glu Arg Ile Lys Ala Thr Lys Glu Leu Glu	
145 150 155 160	
gcc tgg aaa gaa tat caa aga aaa gct gag gag caa aaa aaa att cag	528
Ala Trp Lys Glu Tyr Gln Arg Lys Ala Glu Glu Gln Lys Lys Ile Gln	
165 170 175	
aga gaa gag aaa tta tgt caa aaa gaa aag caa att aaa gaa gaa aga	576
Arg Glu Glu Lys Leu Cys Gln Lys Glu Lys Gln Ile Lys Glu Glu Arg	
180 185 190	
aaa aaa ata aaa tat aag agt ctt act aga aat ttg gca tct aga aat	624
Lys Lys Ile Lys Tyr Lys Ser Leu Thr Arg Asn Leu Ala Ser Arg Asn	
195 200 205	
ctt gct cca aaa ggg aga aat tca gaa aat ata ttt act gag aag tta	672
Leu Ala Pro Lys Gly Arg Asn Ser Glu Asn Ile Phe Thr Glu Lys Leu	
210 215 220	
aag gaa gac agt att cct gct cct cgc tct gtt ggc agt att aaa atc	720
Lys Glu Asp Ser Ile Pro Ala Pro Arg Ser Val Gly Ser Ile Lys Ile	
225 230 235 240	
aac ttt acc cct cga gta ttc cca aca gct ctt cgt gaa tca caa gta	768
Asn Phe Thr Pro Arg Val Phe Pro Thr Ala Leu Arg Glu Ser Gln Val	
245 250 255	
gca gaa gag gag gag tgg cta cac aaa caa gct gag gca cga aga gca	816
Ala Glu Glu Glu Glu Trp Leu His Lys Gln Ala Glu Ala Arg Arg Ala	
260 265 270	
atg aat act gac ata gct gaa ctt tgc gat tta aaa gaa gaa gaa aag	864
Met Asn Thr Asp Ile Ala Glu Leu Cys Asp Leu Lys Glu Glu Glu Lys	
275 280 285	
aac cca gaa tgg ttg aag gat aaa gga aac aaa ttg ttt gca aca gaa	912
Asn Pro Glu Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu	
290 295 300	
aac tat ttg gca gct atc aat gca tat aat tta gcc ata aga cta aat	960
Asn Tyr Leu Ala Ala Ile Asn Ala Tyr Asn Leu Ala Ile Arg Leu Asn	
305 310 315 320	
aat aag atg cca cta ttg tat ttg aac cgg gct gct tgc cac cta aaa	1008
Asn Lys Met Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys	
325 330 335	
cta aaa aac tta cac aag gct att gaa gat tct tct aag gca ctg gaa	1056
Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu	
340 345 350	
tta ttg atg cca cct gtt aca gac aat gct aat gca aga atg aag gca	1104
Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met Lys Ala	
355 360 365	
cat gta cga cgt gga aca gca ttc tgt caa cta gaa ttg tat gta gaa	1152
His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu	
370 375 380	

ggc cta cag gat tat gaa gcg gca ctt aag att gat cca tcc aac aaa 1200
 Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser Asn Lys
 385 390 395 400

att gta caa att gat gct gag aag att cgg aat gta att caa gga aca 1248
 Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln Gly Thr
 405 410 415

gaa cta aaa tct taa 1263
 Glu Leu Lys Ser
 420

<210> 14

<211> 420

<212> PRT

<213> Pan troglodytes

<400> 14

Met Pro Leu Gln Val Ser Asp Tyr Ser Trp Gln Gln Thr Lys Thr Ala
 1 5 10 15

Val Phe Leu Ser Leu Pro Leu Lys Gly Val Cys Val Arg Asp Thr Asp
 20 25 30

Val Phe Cys Met Glu Asn Tyr Leu Lys Val Asn Phe Pro Pro Phe Leu
 35 40 45

Phe Glu Ala Phe Leu Tyr Ala Pro Ile Asp Asp Glu Ser Ser Lys Ala
 50 55 60

Lys Ile Gly Asn Asp Thr Ile Val Phe Thr Leu Tyr Lys Lys Glu Ala
 65 70 75 80

Ala Met Trp Glu Thr Leu Ser Val Thr Gly Val Asp Lys Glu Met Met
 85 90 95

Gln Arg Ile Arg Glu Lys Ser Ile Leu Gln Ala Gln Glu Arg Ala Lys
 100 105 110

Glu Ala Thr Glu Ala Lys Ala Ala Lys Arg Glu Asp Gln Lys Tyr
 115 120 125

Ala Leu Ser Val Met Met Lys Ile Glu Glu Glu Glu Arg Lys Lys Ile
 130 135 140

Glu Asp Met Lys Glu Asn Glu Arg Ile Lys Ala Thr Lys Glu Leu Glu
 145 150 155 160

Ala Trp Lys Glu Tyr Gln Arg Lys Ala Glu Glu Gln Lys Lys Ile Gln
 165 170 175

Arg Glu Glu Lys Leu Cys Gln Lys Glu Lys Gln Ile Lys Glu Glu Arg
 180 185 190

Lys Lys Ile Lys Tyr Lys Ser Leu Thr Arg Asn Leu Ala Ser Arg Asn
 195 200 205

Leu Ala Pro Lys Gly Arg Asn Ser Glu Asn Ile Phe Thr Glu Lys Leu
 210 215 220

Lys Glu Asp Ser Ile Pro Ala Pro Arg Ser Val Gly Ser Ile Lys Ile
 225 230 235 240
 Asn Phe Thr Pro Arg Val Phe Pro Thr Ala Leu Arg Glu Ser Gln Val
 245 250 255
 Ala Glu Glu Glu Glu Trp Leu His Lys Gln Ala Glu Ala Arg Arg Ala
 260 265 270
 Met Asn Thr Asp Ile Ala Glu Leu Cys Asp Leu Lys Glu Glu Glu Lys
 275 280 285
 Asn Pro Glu Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu
 290 295 300
 Asn Tyr Leu Ala Ala Ile Asn Ala Tyr Asn Leu Ala Ile Arg Leu Asn
 305 310 315 320
 Asn Lys Met Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys
 325 330 335
 Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu
 340 345 350
 Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met Lys Ala
 355 360 365
 His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu
 370 375 380
 Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser Asn Lys
 385 390 395 400
 Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln Gly Thr
 405 410 415
 Glu Leu Lys Ser
 420

<210> 15
 <211> 1263
 <212> DNA
 <213> Gorilla gorilla

<220>
 <221> CDS
 <222> (1)..(1260)

<400> 15
 atg ccc ctt cag gtt agc gat tac agc tgg cag cag acg aag act gtg 48
 Met Pro Leu Gln Val Ser Asp Tyr Ser Trp Gln Gln Thr Lys Thr Val
 1 5 10 15
 gtc ttt ctg tct ctg ccc ctc aaa ggc gtg tgc gtc aga gac acg gac 96
 Val Phe Leu Ser Leu Pro Leu Lys Gly Val Cys Val Arg Asp Thr Asp
 20 25 30
 gtg ttc tgc acg gaa aac tat ctg aag gtc aac ttt cct cca ttt tta 144
 Val Phe Cys Thr Glu Asn Tyr Leu Lys Val Asn Phe Pro Pro Phe Leu

35					40					45						
ttt	gag	gca	ttt	ctt	tat	gct	ccc	ata	gac	gat	gag	agc	agc	aaa	gca	192
Phe	Glu	Ala	Phe	Leu	Tyr	Ala	Pro	Ile	Asp	Asp	Glu	Ser	Ser	Lys	Ala	
50					55					60						
aag	att	ggg	aat	gac	acc	att	gtc	ttc	acc	ttg	tat	aaa	aaa	gaa	gcg	240
Lys	Ile	Gly	Asn	Asp	Thr	Ile	Val	Phe	Thr	Leu	Tyr	Lys	Lys	Glu	Ala	
65					70					75					80	
gcc	atg	tgg	gag	acc	ctt	tct	gtg	acg	ggg	ggt	gac	aaa	gag	atg	atg	288
Ala	Met	Trp	Glu	Thr	Leu	Ser	Val	Thr	Gly	Val	Asp	Lys	Glu	Met	Met	
85					90					95						
caa	aga	att	aga	gaa	aaa	tct	att	tta	caa	gca	caa	gag	aga	gca	aaa	336
Gln	Arg	Ile	Arg	Glu	Lys	Ser	Ile	Leu	Gln	Ala	Gln	Glu	Arg	Ala	Lys	
100					105					110						
gaa	gct	aca	gaa	gca	aaa	gct	gca	gca	aag	cgg	gaa	gat	caa	aaa	tat	384
Glu	Ala	Thr	Glu	Ala	Lys	Ala	Ala	Ala	Lys	Arg	Glu	Asp	Gln	Lys	Tyr	
115					120					125						
gca	cta	agt	gtc	atg	atg	aag	att	gaa	gaa	gaa	gag	agg	aaa	aaa	ata	432
Ala	Leu	Ser	Val	Met	Met	Lys	Ile	Glu	Glu	Glu	Glu	Arg	Lys	Lys	Ile	
130					135					140						
gaa	gat	atg	aaa	gaa	aat	gaa	cgg	ata	aaa	gcc	act	aaa	gaa	ttg	gaa	480
Glu	Asp	Met	Lys	Glu	Asn	Glu	Arg	Ile	Lys	Ala	Thr	Lys	Glu	Leu	Glu	
145					150					155					160	
gcc	tgg	aaa	gaa	tat	caa	aga	aaa	gct	gag	gag	caa	aaa	gaa	att	cag	528
Ala	Trp	Lys	Glu	Tyr	Gln	Arg	Lys	Ala	Glu	Glu	Gln	Lys	Glu	Ile	Gln	
165					170					175						
aga	gaa	gag	aag	tta	tgt	caa	aaa	gaa	aag	caa	att	aaa	gaa	gaa	aga	576
Arg	Glu	Glu	Lys	Leu	Cys	Gln	Lys	Glu	Lys	Gln	Ile	Lys	Glu	Glu	Arg	
180					185					190						
aaa	aaa	tta	aaa	tat	aag	agt	ctt	act	aga	aat	ttg	gca	tct	aga	aat	624
Lys	Lys	Leu	Lys	Tyr	Lys	Ser	Leu	Thr	Arg	Asn	Leu	Ala	Ser	Arg	Asn	
195					200					205						
ctt	gct	cca	aaa	ggg	aga	aat	tca	gaa	aat	ata	ttt	act	gag	aag	tta	672
Leu	Ala	Pro	Lys	Gly	Arg	Asn	Ser	Glu	Asn	Ile	Phe	Thr	Glu	Lys	Leu	
210					215					220						
aag	gaa	gac	agt	att	cct	gct	cct	cgc	tct	ggt	ggc	agt	att	aaa	atc	720
Lys	Glu	Asp	Ser	Ile	Pro	Ala	Pro	Arg	Ser	Val	Gly	Ser	Ile	Lys	Ile	
225					230					235					240	
aac	ttt	acc	cct	cga	gta	ttc	cca	aca	gct	ctt	cgt	gaa	tca	caa	gta	768
Asn	Phe	Thr	Pro	Arg	Val	Phe	Pro	Thr	Ala	Leu	Arg	Glu	Ser	Gln	Val	
245					250					255						
gca	gaa	gag	gag	gag	tgg	cta	cac	aaa	caa	gct	gag	gca	cga	aga	gca	816
Ala	Glu	Glu	Glu	Glu	Trp	Leu	His	Lys	Gln	Ala	Glu	Ala	Arg	Arg	Ala	
260					265					270						
atg	aat	act	gac	ata	gct	gaa	ctt	tgc	gat	tta	aaa	gaa	gaa	gaa	aag	864
Met	Asn	Thr	Asp	Ile	Ala	Glu	Leu	Cys	Asp	Leu	Lys	Glu	Glu	Glu	Lys	
275					280					285						

aac cca gaa tgg ttg aag gat aaa gga aac aaa ttg ttt gca aca gaa 912
 Asn Pro Glu Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu
 290 295 300

aac tat ttg gca gct atc aat gca tat aat tta gcc ata aga cta aat 960
 Asn Tyr Leu Ala Ala Ile Asn Ala Tyr Asn Leu Ala Ile Arg Leu Asn
 305 310 315 320

aat aag atg cca cta ttg tat ttg aac cgg gct gct tgc cac cta aaa 1008
 Asn Lys Met Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys
 325 330 335

cta aaa aac tta cac aag gct att gaa gat tct tct aag gca ctg gaa 1056
 Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu
 340 345 350

tta ttg atg cca cct gtt aca gac aat gct aat gca aga atg aag gca 1104
 Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met Lys Ala
 355 360 365

cat gta cga cgt gga aca gca ttc tgt caa cta gaa ttg tat gta gaa 1152
 His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu
 370 375 380

ggc cta cag gat tat gaa gcg gca ctt aag att gat cca tcc aac aaa 1200
 Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser Asn Lys
 385 390 395 400

att gta caa att gat gct gag aag att cgg aat gta att caa gga aca 1248
 Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln Gly Thr
 405 410 415

gaa cta aaa tct taa 1263
 Glu Leu Lys Ser
 420

<210> 16
 <211> 420
 <212> PRT
 <213> Gorilla gorilla

<400> 16
 Met Pro Leu Gln Val Ser Asp Tyr Ser Trp Gln Gln Thr Lys Thr Val
 1 5 10 15

Val Phe Leu Ser Leu Pro Leu Lys Gly Val Cys Val Arg Asp Thr Asp
 20 25 30

Val Phe Cys Thr Glu Asn Tyr Leu Lys Val Asn Phe Pro Pro Phe Leu
 35 40 45

Phe Glu Ala Phe Leu Tyr Ala Pro Ile Asp Asp Glu Ser Ser Lys Ala
 50 55 60

Lys Ile Gly Asn Asp Thr Ile Val Phe Thr Leu Tyr Lys Lys Glu Ala
 65 70 75 80

Ala Met Trp Glu Thr Leu Ser Val Thr Gly Val Asp Lys Glu Met Met
 85 90 95

Gln Arg Ile Arg Glu Lys Ser Ile Leu Gln Ala Gln Glu Arg Ala Lys
 100 105 110
 Glu Ala Thr Glu Ala Lys Ala Ala Ala Lys Arg Glu Asp Gln Lys Tyr
 115 120 125
 Ala Leu Ser Val Met Met Lys Ile Glu Glu Glu Glu Arg Lys Lys Ile
 130 135 140
 Glu Asp Met Lys Glu Asn Glu Arg Ile Lys Ala Thr Lys Glu Leu Glu
 145 150 155 160
 Ala Trp Lys Glu Tyr Gln Arg Lys Ala Glu Glu Gln Lys Glu Ile Gln
 165 170 175
 Arg Glu Glu Lys Leu Cys Gln Lys Glu Lys Gln Ile Lys Glu Glu Arg
 180 185 190
 Lys Lys Leu Lys Tyr Lys Ser Leu Thr Arg Asn Leu Ala Ser Arg Asn
 195 200 205
 Leu Ala Pro Lys Gly Arg Asn Ser Glu Asn Ile Phe Thr Glu Lys Leu
 210 215 220
 Lys Glu Asp Ser Ile Pro Ala Pro Arg Ser Val Gly Ser Ile Lys Ile
 225 230 235 240
 Asn Phe Thr Pro Arg Val Phe Pro Thr Ala Leu Arg Glu Ser Gln Val
 245 250 255
 Ala Glu Glu Glu Glu Trp Leu His Lys Gln Ala Glu Ala Arg Arg Ala
 260 265 270
 Met Asn Thr Asp Ile Ala Glu Leu Cys Asp Leu Lys Glu Glu Glu Lys
 275 280 285
 Asn Pro Glu Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu
 290 295 300
 Asn Tyr Leu Ala Ala Ile Asn Ala Tyr Asn Leu Ala Ile Arg Leu Asn
 305 310 315 320
 Asn Lys Met Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys
 325 330 335
 Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu
 340 345 350
 Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met Lys Ala
 355 360 365
 His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu
 370 375 380
 Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser Asn Lys
 385 390 395 400
 Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln Gly Thr
 405 410 415

Glu Leu Lys Ser
420

<210> 17
<211> 1263
<212> DNA
<213> Pongo pygmaeus

<220>
<221> CDS
<222> (1)..(1260)

<400> 17
atg ccc ctt cag gtt agc gat tac agc tgg cag cag acg aag act gcg 48
Met Pro Leu Gln Val Ser Asp Tyr Ser Trp Gln Gln Thr Lys Thr Ala
1 5 10 15

gtc ttt ctg tct ctg ccc ctc aaa ggc gtg tgc gtc aga gac acg gac 96
Val Phe Leu Ser Leu Pro Leu Lys Gly Val Cys Val Arg Asp Thr Asp
20 25 30

gtg ttc tgc acg gaa aac tat ctg aag gtc aac ttt cct cca ttt tta 144
Val Phe Cys Thr Glu Asn Tyr Leu Lys Val Asn Phe Pro Pro Phe Leu
35 40 45

ttt gag gca ttt ctt tat gct ccc ata gac gat gag agc agc aaa gca 192
Phe Glu Ala Phe Leu Tyr Ala Pro Ile Asp Asp Glu Ser Ser Lys Ala
50 55 60

aag att ggg aat gac acc att gtc ttc acc ttg tat aaa aaa gaa gcg 240
Lys Ile Gly Asn Asp Thr Ile Val Phe Thr Leu Tyr Lys Lys Glu Ala
65 70 75 80

gcc atg tgg gag acc ctt tct gtg acg ggt gtt gac aaa gag acg atg 288
Ala Met Trp Glu Thr Leu Ser Val Thr Gly Val Asp Lys Glu Thr Met
85 90 95

caa aga att aga gaa aaa tct att tta caa gca caa gag aga gca aaa 336
Gln Arg Ile Arg Glu Lys Ser Ile Leu Gln Ala Gln Glu Arg Ala Lys
100 105 110

gaa gct aca gaa gca aaa gct gca gca aag cgg gaa gat caa aaa tat 384
Glu Ala Thr Glu Ala Lys Ala Ala Lys Arg Glu Asp Gln Lys Tyr
115 120 125

gca cta agt gtc atg atg aag att gaa gaa gaa gag agg aaa aaa ata 432
Ala Leu Ser Val Met Met Lys Ile Glu Glu Glu Glu Arg Lys Lys Ile
130 135 140

gaa gat atg aaa gaa aat gaa cgg ata aaa gcc act aaa gaa ttg gaa 480
Glu Asp Met Lys Glu Asn Glu Arg Ile Lys Ala Thr Lys Glu Leu Glu
145 150 155 160

gcc tgg aaa gaa tat caa aga aaa gct gag gag cac aaa aaa att cag 528
Ala Trp Lys Glu Tyr Gln Arg Lys Ala Glu Glu His Lys Lys Ile Gln
165 170 175

aga gaa gag aaa tta tgt caa aaa gaa aag caa att aaa gaa gaa aga 576
Arg Glu Glu Lys Leu Cys Gln Lys Glu Lys Gln Ile Lys Glu Glu Arg

180	185	190	
aaa aaa tta aaa tac aag agt ctt act aga aat tcg gca tct aga aac Lys Lys Leu Lys Tyr Lys Ser Leu Thr Arg Asn Ser Ala Ser Arg Asn 195 200 205			624
ctt gct cca aaa gga aga aat tca gaa aat ata ttt act gag aag tta Leu Ala Pro Lys Gly Arg Asn Ser Glu Asn Ile Phe Thr Glu Lys Leu 210 215 220			672
aag gaa gac agt att cct gct cct cgc tct gtt ggc agt att aaa atc Lys Glu Asp Ser Ile Pro Ala Pro Arg Ser Val Gly Ser Ile Lys Ile 225 230 235 240			720
aac ttt acc cct cga gta ttc cca aca gct ctt cgt gaa tca caa gta Asn Phe Thr Pro Arg Val Phe Pro Thr Ala Leu Arg Glu Ser Gln Val 245 250 255			768
gca gaa gag gag gag tgg cta cac aaa caa gct gag gca cga aga gca Ala Glu Glu Glu Glu Trp Leu His Lys Gln Ala Glu Ala Arg Arg Ala 260 265 270			816
atg aat act gac ata gct gaa ctt tgc gat tta aaa gaa gaa gaa aag Met Asn Thr Asp Ile Ala Glu Leu Cys Asp Leu Lys Glu Glu Glu Lys 275 280 285			864
aac cca gaa tgg ttg aag gat aaa gga aac aaa ttg ttt gca aca gaa Asn Pro Glu Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu 290 295 300			912
aac tat ttg gca gct atc aat gca tat aat tta gcc ata aga cta aat Asn Tyr Leu Ala Ala Ile Asn Ala Tyr Asn Leu Ala Ile Arg Leu Asn 305 310 315 320			960
aat aag atg cca cta ttg tat ttg aac cgg gct gct tgc cac cta aaa Asn Lys Met Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys 325 330 335			1008
cta aaa aac tta cac aag gct att gaa gat tct tct aag gca ctg gaa Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu 340 345 350			1056
tta ttg atg cca cct gtt aca gac aat gct aat gca aga atg aag gca Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met Lys Ala 355 360 365			1104
cat gta cga cgt gga aca gca ttc tgt caa cta gaa ttg tat gta gaa His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu 370 375 380			1152
ggc cta cag gat tat gaa gcg gca ctt aag att gat cca tcc aac aaa Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser Asn Lys 385 390 395 400			1200
att gta caa att gat gct gag aag att cgg aat gta att caa gga aca Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln Gly Thr 405 410 415			1248
gaa cta aaa tct taa Glu Leu Lys Ser 420			1263

<210> 18
 <211> 420
 <212> PRT
 <213> Pongo pygmaeus

<400> 18

Met	Pro	Leu	Gln	Val	Ser	Asp	Tyr	Ser	Trp	Gln	Gln	Thr	Lys	Thr	Ala
1				5					10					15	
Val	Phe	Leu	Ser	Leu	Pro	Leu	Lys	Gly	Val	Cys	Val	Arg	Asp	Thr	Asp
			20					25					30		
Val	Phe	Cys	Thr	Glu	Asn	Tyr	Leu	Lys	Val	Asn	Phe	Pro	Pro	Phe	Leu
		35					40					45			
Phe	Glu	Ala	Phe	Leu	Tyr	Ala	Pro	Ile	Asp	Asp	Glu	Ser	Ser	Lys	Ala
	50					55					60				
Lys	Ile	Gly	Asn	Asp	Thr	Ile	Val	Phe	Thr	Leu	Tyr	Lys	Lys	Glu	Ala
65					70					75					80
Ala	Met	Trp	Glu	Thr	Leu	Ser	Val	Thr	Gly	Val	Asp	Lys	Glu	Thr	Met
				85					90					95	
Gln	Arg	Ile	Arg	Glu	Lys	Ser	Ile	Leu	Gln	Ala	Gln	Glu	Arg	Ala	Lys
			100					105					110		
Glu	Ala	Thr	Glu	Ala	Lys	Ala	Ala	Ala	Lys	Arg	Glu	Asp	Gln	Lys	Tyr
		115					120					125			
Ala	Leu	Ser	Val	Met	Met	Lys	Ile	Glu	Glu	Glu	Glu	Arg	Lys	Lys	Ile
	130					135					140				
Glu	Asp	Met	Lys	Glu	Asn	Glu	Arg	Ile	Lys	Ala	Thr	Lys	Glu	Leu	Glu
145					150					155					160
Ala	Trp	Lys	Glu	Tyr	Gln	Arg	Lys	Ala	Glu	Glu	His	Lys	Lys	Ile	Gln
				165					170					175	
Arg	Glu	Glu	Lys	Leu	Cys	Gln	Lys	Glu	Lys	Gln	Ile	Lys	Glu	Glu	Arg
			180					185					190		
Lys	Lys	Leu	Lys	Tyr	Lys	Ser	Leu	Thr	Arg	Asn	Ser	Ala	Ser	Arg	Asn
		195					200					205			
Leu	Ala	Pro	Lys	Gly	Arg	Asn	Ser	Glu	Asn	Ile	Phe	Thr	Glu	Lys	Leu
	210					215					220				
Lys	Glu	Asp	Ser	Ile	Pro	Ala	Pro	Arg	Ser	Val	Gly	Ser	Ile	Lys	Ile
225					230					235					240
Asn	Phe	Thr	Pro	Arg	Val	Phe	Pro	Thr	Ala	Leu	Arg	Glu	Ser	Gln	Val
				245					250					255	
Ala	Glu	Glu	Glu	Glu	Trp	Leu	His	Lys	Gln	Ala	Glu	Ala	Arg	Arg	Ala
			260					265					270		
Met	Asn	Thr	Asp	Ile	Ala	Glu	Leu	Cys	Asp	Leu	Lys	Glu	Glu	Glu	Lys
		275					280					285			

Asn Pro Glu Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu
 290 295 300
 Asn Tyr Leu Ala Ala Ile Asn Ala Tyr Asn Leu Ala Ile Arg Leu Asn
 305 310 315 320
 Asn Lys Met Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys
 325 330 335
 Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu
 340 345 350
 Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met Lys Ala
 355 360 365
 His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu
 370 375 380
 Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser Asn Lys
 385 390 395 400
 Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln Gly Thr
 405 410 415
 Glu Leu Lys Ser
 420

<210> 19
 <211> 1263
 <212> DNA
 <213> Pan paniscus

<220>
 <221> CDS
 <222> (1)..(1260)

<400> 19
 atg ccc ctt cag gtt agc gat tac agc tgg cag cag acg aag act gcg 48
 Met Pro Leu Gln Val Ser Asp Tyr Ser Trp Gln Gln Thr Lys Thr Ala
 1 5 10 15
 gtc ttt ctg tct ctg ccc ctc aaa ggc gtg tgc gtc aga gac acg gac 96
 Val Phe Leu Ser Leu Pro Leu Lys Gly Val Cys Val Arg Asp Thr Asp
 20 25 30
 gtg ttc tgc acg gaa aac tat ctg aag gtc aac ttt cct cca ttt tta 144
 Val Phe Cys Thr Glu Asn Tyr Leu Lys Val Asn Phe Pro Pro Phe Leu
 35 40 45
 ttt gag gca ttt ctt tat gct ccc ata gac gat gag agc agc aaa gca 192
 Phe Glu Ala Phe Leu Tyr Ala Pro Ile Asp Asp Glu Ser Ser Lys Ala
 50 55 60
 aag att ggg aat gac acc att gtc ttc acc ttg tat aaa aaa gaa gcg 240
 Lys Ile Gly Asn Asp Thr Ile Val Phe Thr Leu Tyr Lys Lys Glu Ala
 65 70 75 80
 gcc atg tgg gag acc ctt tct gtg acg ggt gtt gac aaa gag atg atg 288

Ala	Met	Trp	Glu	Thr	Leu	Ser	Val	Thr	Gly	Val	Asp	Lys	Glu	Met	Met	
				85					90					95		
caa	aga	att	aga	gaa	aaa	tct	att	tta	caa	gca	caa	gag	aga	gca	aaa	336
Gln	Arg	Ile	Arg	Glu	Lys	Ser	Ile	Leu	Gln	Ala	Gln	Glu	Arg	Ala	Lys	
			100					105					110			
gaa	gct	aca	gaa	gca	aaa	gct	gca	gca	aag	cgg	gaa	gat	caa	aaa	tat	384
Glu	Ala	Thr	Glu	Ala	Lys	Ala	Ala	Ala	Lys	Arg	Glu	Asp	Gln	Lys	Tyr	
		115					120					125				
gca	cta	agt	gtc	atg	atg	aag	att	gaa	gaa	gaa	gag	agg	aaa	aaa	ata	432
Ala	Leu	Ser	Val	Met	Met	Lys	Ile	Glu	Glu	Glu	Glu	Arg	Lys	Lys	Ile	
	130					135						140				
gaa	gat	atg	aaa	gaa	aat	gaa	cgg	ata	aaa	gcc	act	aaa	gaa	ttg	gaa	480
Glu	Asp	Met	Lys	Glu	Asn	Glu	Arg	Ile	Lys	Ala	Thr	Lys	Glu	Leu	Glu	
145					150					155					160	
gcc	tgg	aaa	gaa	tat	caa	aga	aaa	gct	gag	gag	caa	aaa	aaa	att	cag	528
Ala	Trp	Lys	Glu	Tyr	Gln	Arg	Lys	Ala	Glu	Glu	Gln	Lys	Lys	Ile	Gln	
				165					170					175		
aga	gaa	gag	aaa	tta	tgt	caa	aaa	gaa	aag	caa	att	aaa	gaa	gaa	aga	576
Arg	Glu	Glu	Lys	Leu	Cys	Gln	Lys	Glu	Lys	Gln	Ile	Lys	Glu	Glu	Arg	
			180					185					190			
aaa	aaa	ata	aaa	tat	aag	agt	ctt	act	aga	aat	ttg	gca	tct	aga	aat	624
Lys	Lys	Ile	Lys	Tyr	Lys	Ser	Leu	Thr	Arg	Asn	Leu	Ala	Ser	Arg	Asn	
		195					200					205				
ctt	gct	cca	aaa	ggg	aga	aat	tca	gaa	aat	ata	ttt	act	gag	aag	tta	672
Leu	Ala	Pro	Lys	Gly	Arg	Asn	Ser	Glu	Asn	Ile	Phe	Thr	Glu	Lys	Leu	
	210					215					220					
aag	gaa	gac	agt	att	cct	gct	cct	cgc	tct	gtt	ggc	agt	att	aaa	atc	720
Lys	Glu	Asp	Ser	Ile	Pro	Ala	Pro	Arg	Ser	Val	Gly	Ser	Ile	Lys	Ile	
225					230					235					240	
aac	ttt	acc	cct	cga	gta	ttc	cca	aca	gct	ctt	cgt	gaa	tca	caa	gta	768
Asn	Phe	Thr	Pro	Arg	Val	Phe	Pro	Thr	Ala	Leu	Arg	Glu	Ser	Gln	Val	
				245					250					255		
gca	gaa	gag	gag	gag	tgg	ctg	cac	aaa	caa	gct	gag	gca	cga	aga	gca	816
Ala	Glu	Glu	Glu	Glu	Trp	Leu	His	Lys	Gln	Ala	Glu	Ala	Arg	Arg	Ala	
			260					265					270			
atg	aat	act	gac	ata	gct	gaa	ctt	tgc	gat	tta	aaa	gaa	gaa	gaa	aag	864
Met	Asn	Thr	Asp	Ile	Ala	Glu	Leu	Cys	Asp	Leu	Lys	Glu	Glu	Glu	Lys	
		275					280					285				
aac	cca	gaa	tgg	ttg	aag	gat	aaa	gga	aac	aaa	ttg	ttt	gca	aca	gaa	912
Asn	Pro	Glu	Trp	Leu	Lys	Asp	Lys	Gly	Asn	Lys	Leu	Phe	Ala	Thr	Glu	
	290					295					300					
aac	tat	ttg	gca	gct	atc	aat	gca	tat	aat	tta	gcc	ata	aga	cta	aat	960
Asn	Tyr	Leu	Ala	Ala	Ile	Asn	Ala	Tyr	Asn	Leu	Ala	Ile	Arg	Leu	Asn	
305					310					315					320	
aat	aag	atg	cca	cta	ttg	tat	ttg	aac	cgg	gct	gct	tgc	cac	cta	aaa	1008
Asn	Lys	Met	Pro	Leu	Leu	Tyr	Leu	Asn	Arg	Ala	Ala	Cys	His	Leu	Lys	

325	330	335	
cta aaa aac tta cac aag gct att gaa gat tct tct aag gca ctg gaa Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu 340 345 350			1056
tta ttg atg cca cct gtt aca gac aat gct aat gca aga atg aag gca Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met Lys Ala 355 360 365			1104
cat gta cga cgt gga aca gca ttc tgt caa cta gaa ttg tat gta gaa His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu 370 375 380			1152
ggc cta cag gat tat gaa gcg gca ctt aag att gat cca tcc aac aaa Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser Asn Lys 385 390 395 400			1200
att gta caa att gat gct gag aag att cgg aat gta att caa gga aca Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln Gly Thr 405 410 415			1248
gaa cta aaa tct taa Glu Leu Lys Ser 420			1263

<210> 20

<211> 420

<212> PRT

<213> Pan paniscus

<400> 20

Met Pro Leu Gln Val Ser Asp Tyr Ser Trp Gln Gln Thr Lys Thr Ala 1 5 10 15
Val Phe Leu Ser Leu Pro Leu Lys Gly Val Cys Val Arg Asp Thr Asp 20 25 30
Val Phe Cys Thr Glu Asn Tyr Leu Lys Val Asn Phe Pro Pro Phe Leu 35 40 45
Phe Glu Ala Phe Leu Tyr Ala Pro Ile Asp Asp Glu Ser Ser Lys Ala 50 55 60
Lys Ile Gly Asn Asp Thr Ile Val Phe Thr Leu Tyr Lys Lys Glu Ala 65 70 75 80
Ala Met Trp Glu Thr Leu Ser Val Thr Gly Val Asp Lys Glu Met Met 85 90 95
Gln Arg Ile Arg Glu Lys Ser Ile Leu Gln Ala Gln Glu Arg Ala Lys 100 105 110
Glu Ala Thr Glu Ala Lys Ala Ala Lys Arg Glu Asp Gln Lys Tyr 115 120 125
Ala Leu Ser Val Met Met Lys Ile Glu Glu Glu Glu Arg Lys Lys Ile 130 135 140
Glu Asp Met Lys Glu Asn Glu Arg Ile Lys Ala Thr Lys Glu Leu Glu

145		150		155		160
Ala Trp Lys Glu Tyr Gln Arg Lys Ala Glu Glu Gln Lys Lys Ile Gln						
		165		170		175
Arg Glu Glu Lys Leu Cys Gln Lys Glu Lys Gln Ile Lys Glu Glu Arg						
		180		185		190
Lys Lys Ile Lys Tyr Lys Ser Leu Thr Arg Asn Leu Ala Ser Arg Asn						
		195		200		205
Leu Ala Pro Lys Gly Arg Asn Ser Glu Asn Ile Phe Thr Glu Lys Leu						
		210		215		220
Lys Glu Asp Ser Ile Pro Ala Pro Arg Ser Val Gly Ser Ile Lys Ile						
		225		230		240
Asn Phe Thr Pro Arg Val Phe Pro Thr Ala Leu Arg Glu Ser Gln Val						
		245		250		255
Ala Glu Glu Glu Glu Trp Leu His Lys Gln Ala Glu Ala Arg Arg Ala						
		260		265		270
Met Asn Thr Asp Ile Ala Glu Leu Cys Asp Leu Lys Glu Glu Glu Lys						
		275		280		285
Asn Pro Glu Trp Leu Lys Asp Lys Gly Asn Lys Leu Phe Ala Thr Glu						
		290		295		300
Asn Tyr Leu Ala Ala Ile Asn Ala Tyr Asn Leu Ala Ile Arg Leu Asn						
		305		310		315
Asn Lys Met Pro Leu Leu Tyr Leu Asn Arg Ala Ala Cys His Leu Lys						
		325		330		335
Leu Lys Asn Leu His Lys Ala Ile Glu Asp Ser Ser Lys Ala Leu Glu						
		340		345		350
Leu Leu Met Pro Pro Val Thr Asp Asn Ala Asn Ala Arg Met Lys Ala						
		355		360		365
His Val Arg Arg Gly Thr Ala Phe Cys Gln Leu Glu Leu Tyr Val Glu						
		370		375		380
Gly Leu Gln Asp Tyr Glu Ala Ala Leu Lys Ile Asp Pro Ser Asn Lys						
		385		390		395
Ile Val Gln Ile Asp Ala Glu Lys Ile Arg Asn Val Ile Gln Gly Thr						
		405		410		415
Glu Leu Lys Ser						
		420				

<210> 21

<211> 15

<212> PRT

<213> Homo sapiens

<400> 21

Cys Ala Thr Glu Ala Lys Ala Ala Ala Lys Arg Glu Asp Gln Lys

1

5

10

15